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(54) **Mirns-ujjlenyomat tüdőrák diagnosztizálására**

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(56) References cited:
EP-A1- 2 327 800 **WO-A1-2009/070653**

- **CHEN X ET AL: "Characterization of microRNAs in serum: a novel class of biomarkers for diagnosis of cancer and other diseases", CELL RESEARCH - XIBAO YANJIU, NATURE PUBLISHING GROUP, GB, CN, vol. 18, no. 10, 1 October 2008 (2008-10-01), pages 997-1006, XP002714220, ISSN: 1001-0602, DOI: 10.1038/CR.2008.282 [retrieved on 2008-09-02]**
- **QI ZHAO WANG ET AL: "Potential Uses of MicroRNA in Lung Cancer Diagnosis, Prognosis, and Therapy", CURRENT CANCER DRUG TARGETS, BENTHAM SCIENCE PUBLISHERS, HILVERSUM, NL, vol. 9, no. 4, 1 June 2009 (2009-06-01), pages 572-594, XP008151479, ISSN: 1568-0096**
- **RAUL TERUEL-MONTOYA ET AL: "MicroRNA Expression Differences in Human Hematopoietic Cell Lineages Enable Regulated Transgene Expression", PLOS ONE, vol. 9, no. 7, 16 July 2014 (2014-07-16), page e102259, XP055222366, DOI: 10.1371/journal.pone.0102259**

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Description

Background of the invention

[0001] MicroRNAs (miRNA) are a recently discovered class of small non-coding RNAs (17-14 nucleotides). Due to their function as regulators of gene expression they play a critical role both in physiological and in pathological processes, such as cancer (Calin and Croce 2006; Esquela-Kerscher and Slack 2006; Zhang, Pan et al. 2007; Sassen, Miska et al. 2008).

[0002] There is increasing evidence that miRNAs are not only found in tissues but also in human blood both as free circulating nucleic acids (also called circulating miRNAs) and in mononuclear cells. A recent proof-of-principle study demonstrated miRNA expression pattern in pooled blood sera and pooled blood cells, both in healthy individuals and in cancer patients including patients with lung cancer (Chen, Ba et al. 2008). In addition, a remarkable stability of miRNAs in human sera was recently demonstrated (Chen, Ba et al. 2008; Gilad, Meiri et al. 2008). These findings make miRNA a potential tool for diagnostics for various types of diseases based on blood analysis.

[0003] Lung cancer is the leading cause of cancer death worldwide (Jemal, Siegel et al. 2008). Its five-year survival rate is among the lowest of all cancer types and is markedly correlated to the stage at the time of diagnosis (Scott, Howington et al. 2007). Using currently existing techniques, more than two-thirds of lung cancers are diagnosed at late stages, when the relative survival rate is low (Henschke and Yankelevitz 2008). This reality calls for the search of new biomarkers that are able to catch lung cancer while it is still small and locally defined.

[0004] Various markers have been proposed to indicate specific types of disorders and in particular cancer.

[0005] For example, WO 2009/070653 A1 describes a method for the diagnosis, prognosis, and treatment of lung cancer by detecting at least one miRNA in peripheral blood.

[0006] However, there is still a need for more efficient and effective methods and compositions for the diagnosis of diseases and in particular cancer.

Summary of the invention

[0007] The present invention provides novel methods for diagnosing lung cancer based on the determination of specific miRNAs that have altered expression levels in disease states compared to healthy or other relevant controls. The present invention particularly provides novel methods for the diagnosis of lung cancer in human individuals based on miRNA analysis from blood cell samples of peripheral erythrocytes, leukocytes, and thrombocytes.

[0008] Subject-matter of the invention is a method for diagnosing lung cancer, comprising the steps

(a) determining an expression profile of a predetermined set of miRNAs in a biological sample from a patient; and

(b) comparing said expression profile to a reference expression profile,

wherein the comparison of said determined expression profile to said reference expression profile allows for the diagnosis of lung cancer, and wherein said biological sample is a blood cell sample of peripheral erythrocytes, leukocytes, and thrombocytes.

[0009] A "biological sample" may be a sample of biological tissue or fluid. Examples of biological samples are sections of tissues, blood, blood fractions, plasma, serum, etc. A biological sample may be provided by removing a sample of cells from a subject, but can also be provided by using a previously isolated sample. For example, a tissue sample can be removed from a subject suspected of having a disease by conventional biopsy techniques. In a preferred embodiment, a blood sample is taken from the subject. In one embodiment, the blood or tissue sample is obtained from the subject prior to initiation of radiotherapy, chemotherapy or other therapeutic treatment. According to the invention, the biological sample is a blood cell sample of peripheral erythrocytes, leukocytes, and thrombocytes.

[0010] A biological sample from a patient means a sample from a subject suspected to be affected by a disease. As used herein, the term "subject" refers to any mammal, including both human and other mammals. Preferably, the methods of the present invention are applied to human subjects.

[0011] In step (a) of the method of the invention, an expression profile of a predetermined set of miRNAs is determined. The determination may be carried out by any convenient means for determining nucleic acids. For expression profiling, qualitative, semi-quantitative and preferably quantitative detection methods can be used. A variety of techniques are well known to those of skill in the art. In particular, the determination may comprise nucleic acid hybridization and/or nucleic acid amplification steps.

[0012] Nucleic acid hybridization may for example be performed using a solid phase nucleic acid biochip array, in particular a microarray, beads, or *in situ* hybridization. The miRNA microarray technology affords the analysis of a complex biological sample for all expressed miRNAs. Nucleotides with complementarity to the corresponding miRNAs are spotted or synthesized on coated carriers. E.g., miRNAs isolated from the sample of interest may be labelled, e.g. fluorescently labelled, so that upon hybridization of the miRNAs to the complementary sequences on the carrier the resulting signal indicates the occurrence of a distinct miRNA. Preferably, microarray methods are employed that do not require a labeling of the miRNAs prior to hybridization (Fig. 3-4) and start directly from total RNA input. On one miRNA microarray, preferably the whole predetermined set of miRNAs can

be analyzed. Examples of preferred hybridization assays are shown in Figures 1-4. The design of exemplary miRNA capture probes for use in hybridization assays is depicted in Figures 5 and 6.

[0013] Further, real-time or quantitative real-time polymerase chain reaction (RT-RCR or qRT-PCR) can be used to detect also low abandoned miRNAs. Furthermore, bead-based assays, e.g. the Luminex platform, are suitable.

[0014] Alternative methods for obtaining expression profiles may also contain sequencing, next generation sequencing or mass spectroscopy.

[0015] The predetermined set of miRNAs in step (a) of the method of the invention depends on the disease to be diagnosed, namely lung cancer. The inventors found out that single miRNA biomarkers lack sufficient accuracy, specificity and sensitivity, and therefore it is preferred to analyze more complex miRNA expression patterns, so-called miRNA signatures. The predetermined set of miRNAs comprises one or more miRNA(s), preferably a larger number of miRNAs (miRNA signatures), that are differentially regulated in samples of a patient affected by lung cancer compared to healthy or other relevant controls.

[0016] The expression profile determined in step (a) is subsequently compared to a reference expression profile in step (b). The reference expression profile is the expression profile of the same set of miRNAs in a biological sample originating from the same source as the biological sample from a patient but obtained from a healthy subject. In particular, both the reference expression profile and the expression profile of step (a) are determined in a blood cell sample of peripheral erythrocytes, leukocytes, and thrombocytes. It is understood that the reference expression profile is not necessarily obtained from a single healthy subject but may be an average expression profile of a plurality of healthy subjects. It is preferred to use a reference expression profile obtained from a person of the same gender, and a similar age as the patient. It is also understood that the reference expression profile is not necessarily determined for each test. Appropriate reference profiles stored in databases may also be used. These stored references profiles may, e.g., be derived from previous tests. The reference expression profile may also be a mathematical function or algorithm developed on the basis of a plurality of reference expression profiles.

[0017] The method of the invention is suitable for diagnosing lung cancer. The diagnosis may comprise determining type, rate and/or stage of lung cancer. The course of the disease and the success of therapy such as chemotherapy may be monitored. The method may also provide a prognosis on the survivor rate and enables to determine a patient's response to drugs.

[0018] The inventors succeeded in developing a generally applicable approach to arrive at miRNA signatures that are correlated with a particular disease. The general work flow is depicted in Figure 9. In more detail, the following steps are accomplished:

1. miRNAs are extracted from a biological sample of a patient, preferably a blood or serum sample or a sample comprising erythrocytes, leukocytes or thrombocytes, using suitable kits / purification methods
2. The respective samples are measured using experimental techniques. These techniques include but are not restricted to:

- Array based approaches
- Real time quantitative polymerase chain reaction
- Bead-based assays (e.g. Luminex)
- Sequencing
- Next Generation Sequencing
- Mass Spectroscopy

3. Mathematical approaches are applied to gather information on the value and the redundancy of single biomarkers. These methods include, but are not restricted to:

- basic mathematic approaches (e.g. Fold Quotients, Signal to Noise ratios, Correlation)
- statistical methods as hypothesis tests (e.g. t-test, Wilcoxon-Mann-Whitney test), the Area under the Receiver operator Characteristics Curve
- Information Theory approaches, (e.g. the Mutual Information, Cross-entropy)
- Probability theory (e.g. joint and conditional probabilities)
- Combinations and modifications of the previously mentioned examples

4. The information collected in 3) are used to estimate for each biomarker the diagnostic content or value. Usually, however, this diagnostic value is too small to get a highly accurate diagnosis with accuracy rates, specificities and sensitivities beyond the 90% barrier.
Please note that the diagnostic content for our miRNAs can be found in the attached figures. These figures include the miRNAs with the sequences, the fold quotient, the mutual information and the significance value as computed by a t-test.
5. Thus statistical learning / machine learning / bioinformatics / computational approaches are applied to define subsets of biomarkers that are tailored for the detection of diseases. These techniques includes but are not restricted to

- Wrapper subset selection techniques (e.g. forward step-wise, backward step-wise, combinatorial approaches, optimization approaches)
- Filter subset selection methods (e.g. the methods mentioned in 3)

- Principal Component Analysis
- Combinations and modifications of such methods (e.g. hybrid approaches)

6. The diagnostic content of each detected set can be estimated by mathematical and/or computational techniques to define the diagnostic information content of subsets.
7. The subsets, detected in step 5, which may range from only a small number (at least two) to all measured biomarkers is then used to carry out a diagnosis. To this end, statistical learning / machine learning / bioinformatics / computational approaches are applied that include but are not restricted to any type of supervised or unsupervised analysis:

- Classification techniques (e.g. naïve Bayes, Linear Discriminant Analysis, Quadratic Discriminant Analysis Neural Nets, Tree based approaches, Support Vector Machines, Nearest Neighbour Approaches)
- Regression techniques (e.g. linear Regression, Multiple Regression, logistic regression, probit regression, ordinal logistic regression ordinal Probit-Regression, Poisson Regression, negative binomial Regression, multinomial logistic Regression, truncated regression)
- Clustering techniques (e.g. k-means clustering, hierarchical clustering, PCA)
- Adaptations, extensions, and combinations of the previously mentioned approaches

[0019] The inventors surprisingly found out that the described approach yields in miRNA signatures that provide high diagnostic accuracy, specificity and sensitivity in the determination of lung cancer.

[0020] According to the invention, the disease to be determined is lung cancer, e.g. lung carcinoid, lung pleural mesothelioma or lung squamous cell carcinoma, in particular non-small cell lung carcinoma.

[0021] The inventors succeeded in determining miRNAs that are differentially regulated in samples from lung cancer patients as compared to healthy controls. A complete overview of all miRNAs that are found to be differentially regulated in blood samples of lung cancer patients is provided in the tables shown in Figures 10A and 10B. In the tables shown in Figures 10A and 10B, the miRNAs that are found to be differentially regulated are sorted in the order of their mutual information and in the order of their t-test significance as described in more detail below. Mutual information (MI) (Shannon, 1984) is an adequate measure to estimate the overall diagnostic information content of single biomarkers (Keller, Ludwig et al., 2006).

[0022] According to the invention mutual information is considered as the reduction in uncertainty about the class labels "0" for controls and "1" for tumor samples due to the knowledge of the miRNA expression. The higher the value of the MI of a miRNA, the higher is the diagnostic content of the respective miRNA. The computation of the MI of each miRNA is explained in the experimental section below.

[0023] For example, the predetermined set of miRNAs representative for lung cancer comprises at least 1, 7 ,10 ,15 ,20, 25, 30, 35, 40, 50, 75, 100 of the miRNAs selected from the group consisting of hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a*, hsa-miR-26b, hsa-miR-604, hsa-miR-423-3p, hsa-miR-93*, hsa-miR-29a, hsa-miR-1248, hsa-miR-210, hsa-miR-19b, hsa-miR-453, hsa-miR-126*, hsa-miR-188-3p, hsa-miR-624*, hsa-miR-505*, hsa-miR-425, hsa-miR-339-3p, hsa-miR-668, hsa-miR-363*, hsa-miR-15b*, hsa-miR-29c*, hsa-miR-550*, hsa-miR-34c-3p, hsa-miR-20a, hsa-miR-374a, hsa-miR-145*, hsa-miR-302b, hsa-miR-106a, hsa-miR-30e, hsa-miR-223, hsa-miR-1269, hsa-let-7b, hsa-miR-542-3p, hsa-miR-516b*, hsa-miR-451, hsa-miR-519c-3p, hsa-miR-1244, hsa-miR-602, hsa-miR-361-3p, hsa-miR-19a*, hsa-miR-433, hsa-miR-1200, hsa-miR-522, hsa-miR-520f, hsa-miR-519c-5p, hsa-miR-192, hsa-miR-1245, hsa-miR-151-5p, hsa-miR-1288, hsa-miR-503, hsa-miR-563, hsa-miR-663b, hsa-let-7d*, hsa-miR-199a-5p, hsa-miR-720, hsa-miR-1246, hsa-miR-338-5p, hsa-miR-297, hsa-miR-1261, hsa-miR-922, hsa-miR-185, hsa-miR-611, hsa-miR-1272, hsa-miR-1299, hsa-miR-335*, hsa-miR-497, hsa-miR-1207-3p, hsa-miR-16, hsa-miR-1, hsa-miR-1291, hsa-miR-138-2*, hsa-miR-136, hsa-miR-548d-3p, hsa-miR-561, hsa-miR-548h, hsa-miR-331-3p, hsa-miR-186*, hsa-miR-145, hsa-miR-17, hsa-miR-30b, hsa-let-7f-1*, hsa-miR-1305, hsa-miR-129-5p, hsa-miR-1204, hsa-miR-106b*, hsa-miR-619, hsa-miR-34a*, hsa-miR-652, hsa-miR-1256, hsa-miR-20b*, hsa-miR-424*, hsa-miR-517a, hsa-miR-1284, hsa-miR-199b-3p, hsa-miR-599, hsa-miR-411, hsa-miR-23b, hsa-miR-1302, hsa-miR-449a, hsa-miR-548f, hsa-miR-597, hsa-miR-603, hsa-miR-1247, hsa-miR-1539, hsa-miR-1911, hsa-miR-325, hsa-miR-409-5p, hsa-miR-182, hsa-miR-658, hsa-miR-215, hsa-miR-147b, hsa-miR-30d, hsa-miR-378*, hsa-miR-221*, hsa-miR-34b, hsa-miR-593*, hsa-miR-552, hsa-miR-378, hsa-miR-143*, hsa-miR-1266, hsa-miR-554, hsa-miR-631, hsa-miR-609, hsa-miR-30c, hsa-miR-28-5p, hsa-miR-23a, hsa-miR-645, hsa-miR-647, hsa-miR-302b*, hsa-miR-607, hsa-miR-1289, hsa-miR-1324, hsa-miR-513a-3p, hsa-miR-939, hsa-miR-29b, hsa-miR-665, hsa-miR-18a, hsa-miR-1224-5p, hsa-miR-10a*, hsa-miR-181a*, hsa-miR-218-2*, hsa-miR-371-3p, hsa-miR-377, hsa-miR-140-5p, hsa-miR-301a, hsa-miR-1277, hsa-miR-130a*, hsa-miR-1912, hsa-miR-193b, hsa-miR-214*, hsa-miR-216b, hsa-miR-302f, hsa-miR-522*, hsa-miR-548j, hsa-miR-568, hsa-miR-648, hsa-miR-662, hsa-miR-222, hsa-miR-1287,

hsa-miR-891b, hsa-miR-342-3p, hsa-miR-512-3p, hsa-miR-623, hsa-miR-208b, hsa-miR-16-1*, hsa-miR-551b, hsa-miR-146b-3p, hsa-miR-520b, hsa-miR-449b, hsa-miR-520g, hsa-miR-24-2*, hsa-miR-518f, hsa-miR-649, hsa-miR-32, hsa-miR-151-3p, hsa-miR-454, hsa-miR-101, hsa-miR-19b-1*, hsa-miR-509-5p, hsa-miR-144, hsa-miR-508-5p, hsa-miR-569, hsa-miR-636, hsa-miR-937, hsa-miR-346, hsa-miR-506, hsa-miR-379*, hsa-miR-1184, hsa-miR-579, hsa-miR-23b*, hsa-miR-1262, hsa-miR-153, hsa-miR-520e, hsa-miR-632, hsa-miR-106a*, hsa-miR-31*, hsa-miR-33b*, hsa-miR-654-3p, hsa-miR-99b*, hsa-miR-1278, hsa-miR-135b, hsa-let-7c*, hsa-miR-1468, hsa-miR-374b*, hsa-miR-514, hsa-miR-590-3p, hsa-miR-606, hsa-miR-369-3p, hsa-miR-488, hsa-miR-128, hsa-miR-362-5p, hsa-miR-671-5p, hsa-miR-874, hsa-miR-1911*, hsa-miR-1292, hsa-miR-194, hsa-miR-15b, hsa-miR-342-5p, hsa-miR-125b-2*, hsa-miR-1297, hsa-miR-933, hsa-miR-493*, hsa-miR-105, hsa-miR-141, hsa-miR-181c*, hsa-miR-193a-3p, hsa-miR-302c, hsa-miR-485-5p, hsa-miR-499-3p, hsa-miR-545, hsa-miR-548b-5p, hsa-miR-549, hsa-miR-576-5p, hsa-miR-577, hsa-miR-583, hsa-miR-587, hsa-miR-624, hsa-miR-646, hsa-miR-655, hsa-miR-885-5p, hsa-miR-194*, hsa-miR-299-5p, hsa-miR-337-3p, hsa-miR-493, hsa-miR-497*, hsa-miR-519a, hsa-miR-99a*, hsa-miR-1280, hsa-miR-523*, hsa-miR-198, hsa-miR-934, hsa-miR-30d*, hsa-miR-452*, hsa-miR-548b-3p, hsa-miR-586, hsa-miR-92b, hsa-miR-517b, hsa-miR-548a-3p, hsa-miR-875-5p, hsa-miR-431*, hsa-miR-384, hsa-miR-644, hsa-miR-1185, hsa-miR-29b-2*, hsa-miR-489, hsa-miR-566, hsa-miR-1538, hsa-miR-28-3p, hsa-let-7f-2*, hsa-miR-1322, hsa-miR-1827, hsa-miR-192*, hsa-miR-302e, hsa-miR-411*, hsa-miR-424, hsa-miR-582-3p, hsa-miR-629*, hsa-miR-491-3p, hsa-miR-519b-3p, hsa-miR-1197, hsa-miR-127-5p, hsa-miR-1286, hsa-miR-132*, hsa-miR-33b, hsa-miR-553, hsa-miR-620, hsa-miR-708, hsa-miR-892b, hsa-miR-520h, hsa-miR-500*, hsa-miR-551b*, hsa-miR-186, hsa-miR-558, hsa-miR-26a, hsa-miR-1263, hsa-miR-211, hsa-miR-1304, hsa-miR-220b, hsa-miR-891a, hsa-miR-1253, hsa-miR-1205, hsa-miR-137, hsa-miR-154*, hsa-miR-555, hsa-miR-887, hsa-miR-363, hsa-miR-1537, hsa-miR-219-1-3p, hsa-miR-220a, hsa-miR-222*, hsa-miR-323-3p, hsa-miR-376b, hsa-miR-490-5p, hsa-miR-523, hsa-miR-302a*, hsa-miR-27b*, hsa-miR-591, hsa-miR-888, hsa-miR-376a*, hsa-miR-618, hsa-miR-1182, hsa-miR-532-3p, hsa-miR-181 b, hsa-miR-521, hsa-miR-545*, hsa-miR-9*, hsa-miR-920, hsa-miR-571, hsa-miR-635, hsa-miR-200b, hsa-miR-455-5p, hsa-miR-876-3p, hsa-miR-373*, hsa-miR-146a*, hsa-miR-122*, hsa-miR-450b-3p, hsa-miR-24, hsa-miR-484, hsa-miR-103-as, hsa-miR-380, hsa-miR-513a-5p, hsa-miR-509-3-5p, hsa-miR-873, hsa-miR-556-5p, hsa-miR-369-5p, hsa-miR-653, hsa-miR-767-3p, hsa-miR-516a-3p, hsa-miR-520c-3p, hsa-miR-708*, hsa-miR-924, hsa-miR-520d-5p, hsa-miR-512-5p, hsa-miR-374a*, hsa-miR-921, hsa-miR-1206, hsa-miR-1259, hsa-miR-525-5p, hsa-miR-200a*, hsa-miR-1293, hsa-miR-372, hsa-miR-548a-5p, hsa-miR-548k, hsa-miR-1300, hsa-miR-1264, hsa-miR-551a, hsa-miR-196b, hsa-miR-32*, hsa-miR-33a, hsa-miR-548d-5p, hsa-miR-616, hsa-miR-876-5p, hsa-miR-508-3p, hsa-miR-26a-2*, hsa-miR-187, hsa-miR-199a-3p, hsa-miR-96*, hsa-miR-18b, hsa-miR-432*, hsa-miR-509-3p, hsa-miR-1183, hsa-miR-626, hsa-miR-513b, hsa-miR-617, hsa-miR-9, hsa-miR-519e, hsa-miR-204, hsa-miR-29c, hsa-miR-1268, hsa-miR-122, hsa-miR-7-2*, hsa-miR-15a*, hsa-miR-181d, hsa-miR-219-5p, hsa-miR-302d, hsa-miR-34a, hsa-miR-410, hsa-miR-33a*, hsa-miR-502-3p, hsa-miR-379, hsa-miR-498, hsa-miR-518d-5p, hsa-miR-556-3p, hsa-miR-502-5p, hsa-miR-31, hsa-miR-100, hsa-miR-296-3p, hsa-miR-615-5p, hsa-miR-21*, hsa-miR-657, hsa-miR-651, hsa-miR-765, hsa-miR-548m, hsa-miR-219-2-3p, hsa-miR-501-3p, hsa-miR-302a, hsa-miR-202*, hsa-miR-206, hsa-miR-520d-3p, hsa-miR-548i, hsa-miR-511, hsa-miR-30a, hsa-miR-1224-3p, hsa-miR-525-3p, hsa-miR-1225-5p, hsa-miR-223*, hsa-miR-615-3p, hsa-miR-570, hsa-miR-320a, hsa-miR-770-5p, hsa-miR-582-5p, hsa-miR-590-5p, hsa-miR-659, hsa-miR-1251, hsa-miR-664, hsa-miR-488*, hsa-miR-548g, hsa-miR-802, hsa-miR-542-5p, hsa-miR-190, hsa-miR-218-1*, hsa-miR-367*, hsa-miR-450a, hsa-miR-367, hsa-miR-124, hsa-miR-767-5p, hsa-miR-200c, hsa-miR-572, hsa-miR-526a, hsa-miR-936, hsa-miR-548n, hsa-miR-21, hsa-miR-182*, hsa-miR-34c-5p, hsa-miR-429, hsa-miR-628-5p, hsa-miR-29a*, hsa-miR-370, hsa-let-7a*, hsa-miR-101*, hsa-miR-559, hsa-miR-217, hsa-miR-519b-5p, hsa-miR-30e*, hsa-miR-147, hsa-miR-487b, hsa-miR-888*, hsa-miR-205, hsa-miR-1257, hsa-miR-7, hsa-miR-296-5p, hsa-miR-1255a, hsa-miR-380*, hsa-miR-1275, hsa-miR-330-5p, hsa-miR-1243, hsa-miR-136*, hsa-miR-141*, hsa-miR-517c, hsa-miR-621, hsa-miR-1915*, hsa-miR-541, hsa-miR-543, hsa-miR-942, hsa-miR-26a-1*, hsa-miR-567, hsa-miR-184, hsa-miR-376a, hsa-miR-124*, hsa-miR-1254, hsa-miR-1207-5p, hsa-miR-580, hsa-let-7b*, hsa-miR-539, hsa-miR-520a-3p, hsa-miR-585, hsa-miR-675b, hsa-miR-943, hsa-miR-573, hsa-miR-93, hsa-miR-27a*, hsa-miR-613, hsa-miR-220c, hsa-miR-524-3p, hsa-miR-500, hsa-miR-1201, hsa-miR-20a*, hsa-miR-1914*, hsa-miR-425*, hsa-miR-515-3p, hsa-miR-377*, hsa-miR-504, hsa-miR-548c-3p, hsa-miR-1276, hsa-miR-138, hsa-miR-431, hsa-miR-494, hsa-miR-448, hsa-miR-633, hsa-miR-487a, hsa-miR-149, hsa-miR-300, hsa-miR-1826, hsa-miR-127-3p, hsa-miR-486-5p, hsa-miR-148a, hsa-miR-1294, hsa-miR-548l, hsa-miR-142-5p, hsa-miR-889, hsa-miR-365, hsa-miR-99b, hsa-miR-200b*, hsa-miR-200a, hsa-miR-518e, hsa-miR-612, hsa-miR-183*, hsa-miR-148b, hsa-miR-103, hsa-miR-548o, hsa-miR-1203, hsa-miR-135a*, hsa-miR-383, hsa-miR-1913, hsa-miR-373, hsa-miR-371-5p, hsa-miR-298, hsa-miR-758, hsa-miR-412, hsa-miR-518c, hsa-miR-589*, hsa-miR-643, hsa-miR-592, hsa-miR-892a, hsa-miR-944, hsa-miR-576-3p, hsa-miR-581, hsa-miR-625*, hsa-miR-1260, hsa-miR-1281, hsa-miR-337-5p, hsa-miR-133b, hsa-miR-92a-2*, hsa-miR-100*, hsa-miR-589, hsa-miR-218, hsa-miR-

224, hsa-miR-16-2*, hsa-miR-301b, hsa-miR-190b, hsa-miR-375, hsa-miR-548p, hsa-miR-185*, hsa-miR-519d, hsa-miR-605, hsa-miR-877, hsa-miR-125a-3p, hsa-miR-744*, hsa-miR-520c-5p, hsa-miR-148a*, hsa-miR-212, hsa-miR-505, hsa-miR-496, hsa-miR-1323, hsa-miR-548e, hsa-miR-628-3p, hsa-miR-1914, hsa-miR-584, hsa-miR-135b*, hsa-miR-1295, hsa-miR-95, hsa-miR-133a, hsa-miR-485-3p, hsa-miR-541*, hsa-miR-374b, hsa-miR-329, hsa-miR-483-5p, hsa-miR-885-3p, hsa-let-7i*, hsa-miR-935, hsa-miR-130b, hsa-miR-1274a, hsa-miR-1226, hsa-miR-518e*, hsa-miR-1225-3p, hsa-miR-923, hsa-miR-196a*, hsa-miR-1270, hsa-miR-1271, hsa-miR-610, hsa-miR-574-3p, hsa-miR-1282, hsa-miR-10b*, hsa-miR-216a, hsa-miR-144*, hsa-miR-23a*, hsa-miR-499-5p, hsa-miR-183, hsa-miR-490-3p, hsa-miR-330-3p, hsa-let-7g*, hsa-miR-483-3p, hsa-miR-214, hsa-miR-34b*, hsa-miR-302d*, hsa-miR-382, hsa-miR-454*, hsa-miR-1202, hsa-miR-202, hsa-miR-544, hsa-miR-593, hsa-miR-760, hsa-miR-940, hsa-let-7e*, hsa-miR-1237, hsa-miR-18b*, hsa-miR-630, hsa-miR-519e*, hsa-miR-452, hsa-miR-26b*, hsa-miR-516b, hsa-miR-299-3p, hsa-miR-381, hsa-miR-340, hsa-miR-132, hsa-miR-142-3p, hsa-miR-125b-1*, hsa-miR-30c-2*, hsa-miR-627, hsa-miR-1908, hsa-miR-1267, hsa-miR-507, hsa-miR-188-5p, hsa-miR-486-3p, hsa-miR-596, hsa-miR-193a-5p, hsa-miR-671-3p, hsa-miR-24-1*, hsa-miR-19b-2*, hsa-miR-1308, hsa-miR-208a, hsa-miR-135a, hsa-miR-331-5p, hsa-miR-181c, hsa-miR-640, hsa-miR-1909, hsa-miR-629, hsa-miR-10a, hsa-miR-491-5p, hsa-miR-492, hsa-miR-516a-5p, hsa-miR-510, hsa-miR-1915, hsa-miR-518c*, hsa-miR-1273, hsa-miR-25*, hsa-miR-744, hsa-miR-550, hsa-miR-890, hsa-miR-1303, hsa-miR-650, hsa-miR-1227, hsa-miR-595, hsa-miR-1255b, hsa-miR-1252, hsa-miR-455-3p, hsa-miR-345, hsa-miR-96, hsa-miR-1321, hsa-miR-513c, hsa-miR-548c-5p, hsa-miR-663, hsa-miR-320c, hsa-miR-320b, hsa-miR-654-5p, hsa-miR-326, hsa-miR-1825, hsa-miR-328, hsa-miR-146b-5p, hsa-miR-886-3p, hsa-miR-1909*, hsa-miR-1469, hsa-miR-338-3p, hsa-miR-886-5p, hsa-miR-601, hsa-miR-1298, hsa-miR-1910, hsa-miR-1226*, hsa-miR-421, hsa-miR-1471, hsa-miR-150*, hsa-miR-1229, hsa-miR-17*, hsa-miR-320d, hsa-miR-10b, hsa-miR-766, hsa-miR-600, hsa-miR-641, hsa-miR-340*, hsa-miR-616*, hsa-miR-520a-5p, hsa-miR-1179, hsa-miR-1178, hsa-miR-30b*, hsa-miR-155*, hsa-miR-138-1*, hsa-miR-501-5p, hsa-miR-191, hsa-miR-107, hsa-miR-639, hsa-miR-518d-3p, hsa-miR-106b, hsa-miR-129-3p, hsa-miR-1306, hsa-miR-187*, hsa-miR-125b, hsa-miR-642, hsa-miR-30a*, hsa-miR-139-5p, hsa-miR-1307, hsa-miR-769-3p, hsa-miR-532-5p, hsa-miR-7-1*, hsa-miR-196a, hsa-miR-1296, hsa-miR-191*, hsa-miR-221, hsa-miR-92a-1*, hsa-miR-1285, hsa-miR-518f*, hsa-miR-1233, hsa-miR-1290, hsa-miR-598, hsa-miR-769-5p, hsa-miR-614, hsa-miR-578, hsa-miR-1301, hsa-miR-515-5p, hsa-miR-564, hsa-miR-634, hsa-miR-518b, hsa-miR-941, hsa-miR-376c, hsa-miR-195*, hsa-miR-518a-5p, hsa-miR-557, hsa-miR-1228*, hsa-miR-22*, hsa-miR-1234, hsa-miR-149*, hsa-miR-30c-1*, hsa-miR-200c*, hsa-miR-1181, hsa-miR-323-5p, hsa-miR-1231, hsa-miR-203, hsa-miR-302c*, hsa-miR-99a, hsa-miR-146a, hsa-miR-656, hsa-miR-526b*, hsa-miR-148b*, hsa-miR-181a, hsa-miR-622, hsa-miR-125a-5p, hsa-miR-152, hsa-miR-197, hsa-miR-27b, hsa-miR-1236, hsa-miR-495, hsa-miR-143, hsa-miR-362-3p, hsa-miR-675, hsa-miR-1274b, hsa-miR-139-3p, hsa-miR-130b*, hsa-miR-1228, hsa-miR-1180, hsa-miR-575, hsa-miR-134, hsa-miR-875-3p, hsa-miR-92b*, hsa-miR-660, hsa-miR-526b, hsa-miR-422a, hsa-miR-1250, hsa-miR-938, hsa-miR-608, hsa-miR-1279, hsa-miR-1249, hsa-miR-661, hsa-miR-1208, hsa-miR-130a, hsa-miR-450b-5p, hsa-miR-432, hsa-miR-409-3p, hsa-miR-527, hsa-miR-877*, hsa-miR-1238, hsa-miR-517*, hsa-miR-193b*, hsa-miR-524-5p, hsa-miR-1258, hsa-miR-154, hsa-miR-637, hsa-miR-588, hsa-miR-155, hsa-miR-664*, hsa-miR-1470, hsa-miR-105*, hsa-miR-324-5p, hsa-miR-129*, hsa-miR-625, hsa-miR-519a*, hsa-miR-181a-2*, hsa-miR-199b-5p, hsa-miR-27a, hsa-miR-518a-3p, hsa-miR-1265, hsa-miR-92a, hsa-miR-29b-1*, hsa-miR-150, hsa-miR-335, hsa-miR-638.

[0024] The miRNAs that provide the highest mutual information in samples from lung cancer patients compared to healthy controls are hsa-miR-361-5p, hsa-miR-23b, hsa-miR-126, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, hsa-miR-23a, hsa-miR-1914*, hsa-miR-29c, hsa-miR-505*, hsa-let-7d, hsa-miR-378, hsa-miR-29b, hsa-miR-604, hsa-miR-29b, hsa-let-7b, hsa-miR-299-3p, hsa-miR-423-3p, hsa-miR-18a*, hsa-miR-1909, hsa-let-7c, hsa-miR-15a, hsa-miR-425, hsa-miR-93*, hsa-miR-665, hsa-miR-30e, hsa-miR-339-3p, hsa-miR-1307, hsa-miR-625*, hsa-miR-193a-5p, hsa-miR-130b, hsa-miR-17*, hsa-miR-574-5p, hsa-miR-324-3p (group (a)).

[0025] Further, the measured miRNA profiles of Fig. 10A and 10B were classified according to their significance in t-tests as described in more detail in the experimental section. The miRNAs that performed best according to the t-test results are hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a*, hsa-miR-26b, hsa-miR-604, hsa-miR-423-3p, hsa-miR-93* (group (b)). A comparison of a subset of 15 of these miRNAs is depicted in Figure 12.

[0026] The miRNAs given above that have been grouped in the order of their performance in the t-tests or in the order of their MI-values provide the highest diagnostic power. Thus, preferably the predetermined set of miRNAs for the diagnosis of lung cancer comprises one or more nucleic acids selected from the above groups (a) and (b) of miRNAs. The predetermined set of miRNAs should preferably comprise at least 7, preferably at least 10, 15, 20 or 24 of the indicated nucleic acids. Most pref-

erably, all of the above indicated miRNAs are included in the predetermined set of miRNAs. It is particularly preferred to include the 24, 20, 15, 10 or at least 7 of the first mentioned miRNAs in the order of their performance in the t-tests or of their MI-values. A comparison of the results obtained by determining 4, 8, 10, 16, 20, 24, 28 or 40 miRNAs provided in Figure 13A-G shows that the accuracy of the diagnosis is improved, the more miRNAs are measured.

[0027] In a particularly preferred embodiment of the method of the invention, the predetermined set of miRNAs includes the miRNAs hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a* and hsa-miR-26b.

[0028] In a further particularly preferred embodiment of the method of the invention, the miRNAs are selected from the miRNAs shown in Figure 11A. The predetermined set of miRNAs should preferably comprise at least 7, preferably at least 10, 15, 20 or 24 of the indicated nucleic acids. It is particularly preferred to include the 24, 20, 15, 10 or at least 7 of the first mentioned miRNAs according to their order in the table in Figure 11A.

[0029] In another embodiment, the predetermined set of miRNAs for the diagnosis of lung cancer comprises at least one preferred signature L1-251 as shown in Figure 11B. It should be noted that preferred diagnostic sets may also comprise one or more miRNAs of the miRNAs disclosed in Figure 11B and any combination of the miRNAs together with one or more further diagnostically relevant miRNA from Figures 10A, 10B or 11A. Preferred predetermined sets of miRNA molecules based on Figure 11B comprise at least 3, 4, 5, 6, 7, 8, 9 or 10 miRNAs and up to 10, 15, or 20 or more miRNAs.

[0030] For the diagnosis of different types of diseases, such as for a different type of cancer, a different predetermined set of miRNAs should be determined. The relevant miRNA signatures can be obtained according to the workflow depicted in Figure 9 and as explained above.

[0031] Another embodiment of the present invention is the use of a kit for diagnosing lung cancer, the kit comprising

(a) means for determining an expression profile of a predetermined set of miRNAs in a biological sample from a patient, and
(b) reference expression profile of said predetermined set of miRNAs in a biological sample from a healthy subject,

wherein the biological sample is a blood cell sample of peripheral erythrocytes, leukocytes, and thrombocytes.

[0032] Preferably, one or more reference expression profiles are provided which show the expression profile of the same set of miRNAs in the same type of biological sample obtained from one or more healthy subjects. A comparison to said reference expression profile(s) allows for the diagnosis of the disease.

[0033] The kit is preferably a test kit for detecting a predetermined set of miRNAs in sample by nucleic acid hybridisation and optionally amplification such as PCR or RT-PCR. The kit preferably comprises probes and/or primers for detecting a predetermined set of miRNAs. Further, the kit may comprise enzymes and reagents including reagents for cDNA synthesis from miRNAs prior to realtime PCR.

[0034] A kit for diagnosing lung cancer preferably comprises means for determining the expression profile of one or more miRNAs selected from the group (a) consisting of hsa-miR-361-5p, hsa-miR-23b, hsa-miR-126, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, hsa-miR-23a, hsa-miR-1914*, hsa-miR-29c, hsa-miR-505*, hsa-let-7d, hsa-miR-378, hsa-miR-29b, hsa-miR-604, hsa-miR-29b, hsa-let-7b, hsa-miR-299-3p, hsa-miR-423-3p, hsa-miR-18a*, hsa-miR-1909, hsa-let-7c, hsa-miR-15a, hsa-miR-425, hsa-miR-93*, hsa-miR-665, hsa-miR-30e, hsa-miR-339-3p, hsa-miR-1307, hsa-miR-625*, hsa-miR-193a-5p, hsa-miR-130b, hsa-miR-17*, hsa-miR-574-5p and hsa-miR-324-3p.

[0035] According to another embodiment of the invention, the kit for diagnosing lung cancer preferably comprises means for determining the expression profile of one or more miRNAs selected from the group (b) consisting of hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a*, hsa-miR-26b, hsa-miR-604, hsa-miR-423-3p and hsa-miR-93*.

[0036] In a preferred embodiment, the kit comprises means for determining at least 7, preferably at least 10, 15, 20 or 24 of the indicated groups of miRNAs. It is particularly preferred to include means for determining the 24, 20, 15, 10 or at least 7 of the first mentioned miRNAs in the order of their MI-values or their performance in the t-tests as shown in the tables in Figures 10 and 11. Most preferably, means for determining all of the above indicated miRNAs are included in the kit for diagnosing lung cancer. The kit is particularly suitable for diagnosing lung cancer in a blood, plasma and/or serum sample or in a sample comprising peripheral erythrocytes, leukocytes and/or thrombocytes. According to the present invention, the kit is used for diagnosing lung cancer in a blood cell sample of peripheral erythrocytes, leukocytes, and thrombocytes.

[0037] In a particularly preferred embodiment, the kit comprises means for determining the miRNAs hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-

574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a* and hsa-miR-26b.

[0038] The means for determining a predetermined set of miRNAs may for example comprise a microarray comprising miRNA-specific oligonucleotide probes. In a preferred embodiment, the microarray comprises miRNA-specific oligonucleotide probes for one or more miRNAs selected from the group consisting of (a) hsa-miR-361-5p, hsa-miR-23b, hsa-miR-126, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, hsa-miR-23a, hsa-miR-1914*, hsa-miR-29c, hsa-miR-505*, hsa-let-7d, hsa-miR-378, hsa-miR-29b, hsa-miR-604, hsa-miR-29b, hsa-let-7b, hsa-miR-299-3p, hsa-miR-423-3p, hsa-miR-18a*, hsa-miR-1909, hsa-let-7c, hsa-miR-15a, hsa-miR-425, hsa-miR-93*, hsa-miR-665, hsa-miR-30e, hsa-miR-339-3p, hsa-miR-1307, hsa-miR-625*, hsa-miR-193a-5p, hsa-miR-130b, hsa-miR-17*, hsa-miR-574-5p and hsa-miR-324-3p or (b) hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a*, hsa-miR-26b, hsa-miR-604, hsa-miR-423-3p and hsa-miR-93*. In a preferred embodiment, the microarray comprises oligonucleotide probes for determining at least 7, preferably at least 10, 15, 20 or 24 of the indicated groups (a) and (b) of miRNAs. It is particularly preferred to include oligonucleotide probes for determining the 24, 20, 15, 10 or at least 7 of the first mentioned miRNAs in the order of their MI-values or their performance in the t-tests as shown in the tables in Figures 10 and 11. Most preferably, oligonucleotide probes for determining all of the above indicated miRNAs of groups (a) or (b) are included in the microarray for diagnosing lung cancer.

[0039] In a particularly preferred embodiment, the microarray comprises oligonucleotide probes for determining the miRNAs hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a* and hsa-miR-26b.

[0040] The microarray can comprise oligonucleotide probes obtained from known or predicted miRNA sequences. The array may contain different oligonucleotide probes for each miRNA, for example one containing the active mature sequence and another being specific for the precursor of the miRNA. The array may also contain controls such as one or more sequences differing from the human orthologs by only a few bases, which can serve as controls for hybridization stringency conditions. It is also possible to include viral miRNAs or putative miRNAs as predicted from bioinformatic tools. Further, it is possible to include appropriate controls for non-specific hybridization on the microarray.

[0041] The invention also relates to the use of a set of oligo- or polynucleotides for diagnosing lung cancer, wherein the set of oligo- or polynucleotides comprises the sequences of a set of miRNAs as defined herein and/or the complements thereof. Preferably, at least 5, more preferably at least 7, 10, 15, 20, of the miRNAs indicated herein, and/or the complement of such sequences, are used. It is particularly preferred to include oligo- or polynucleotides for detecting of the most significant miRNAs, which are represented by their order in the table depicted in Figures 10A, 10B or 11A. In a further embodiment, the set includes oligo- or polynucleotides for detecting the miRNA sets based on Figure 11B as described above. The oligo- or polynucleotides preferably have a length of 10, 15 or 20 and up to 30, 40, 50, 100 or more nucleotides. The term "oligo- or polynucleotides" includes single- or double-stranded molecules, RNA molecules, DNA molecules or nucleic acid analogs such as PNA or LNA.

[0042] The invention will now be illustrated by the following figures and the nonlimiting experimental examples.

Figures

[0043]

Figure 1:

Scheme of a miRNA hybridization assay for use in the invention.

- miRNA capture probes consist of 1 miRNA probe sequence stretch that is linked to support via 3'-end or alternatively by 5'-end (not depicted here)
- the miRNA probe sequence stretches are complementary to miRNA target sequences
- each miRNA capture probe can bind 1 miRNA target sequences
- the miRNA target sequences are labeled prior to hybridisation (e.g. by biotin labeling)

Figure 2:

Scheme of an miRNA tandem hybridization assay for use in the invention

- miRNA capture probes consist of 2 DNA-based miRNA probe sequence stretches that are linked to each other by a spacer element
- the miRNA probe sequence stretches are complementary to miRNA target sequenc-

es
- each miRNA capture probe can bind 2 miRNA target sequences
- the spacer sequence consists of 0 - 8 nucleotides

the miRNA target sequences are labeled prior to hybridisation (e.g. by biotin labeling)

Figure 3:

miRNA RAKE-Assay for use in the invention (PT Nelson et al., Nature Methods, 2004, 1(2), 1)

- the miRNA capture probes consist of one miRNA probe sequence stretch (green) and one elongation element (orange)
- probes are orientied 5'→3', presenting a free terminal 3'-OH
- the miRNA probe sequence stretch (green) is complementary to miRNA target sequences (dark green)
- the elongation sequences (orange) can be freely chosen and is typically between 1-12 nucleotides long, preferably a homomeric sequence
- each miRNA capture probe can bind 1 miRNA target sequences
- the miRNA target sequences are NOT labeled prior to hybridisation
- Labeling occurs after hybridisation during elongation by polymerase extention reaction

Biochip is not reusable due to exonuclease treatment

Figure 4:

- miRNA MPEA-Assay for use in the invention (Vorwerk S. et al., Microfluidic-based enzymatic on-chip labeling of miRNAs, N. Biotechnol. 2008; 25(2-3):142-9. Epub 2008 Aug 20)
- the miRNA capture probes consist of one miRNA probe sequence stretch (green) and one elongation element (orange)
- probes are orientied 3'→5', presenting a free terminal 5'-OH the miRNA probe sequence stretch (green) is complementary to miRNA target sequences (dark green)
- the elongation sequences (orange) can be freely chosen and is typically between 1-12 nucleotides long, preferably a homomeric sequence
- each miRNA capture probe can bind 1 miRNA target sequences
- the miRNA target sequences are NOT labeled prior to hybridisation
- Labeling occurs after hybridisation during elongation by polymerase extention reaction
- Biochip is reusable after removal of target / elongated target

Figure 5:

miRNA capture probe design
Depicted is the design of a capture probe for the exemplary miRNA human mature miRNA let-7a for use in the various types of hybridization assays shown in Figures 1-4. SP = spacer element; EL = elongation element

Figure 6:

Spacer Element.
Capture probes for use in e.g. a tandem hybridization assay as shown in Figure 2 may comprise a spacer element SP. The spacer element represents a nucleotide sequence with n = 0-12 nucleotides chosen on the basis of showing low complementarity to potential target sequences, therefore resulting in no to low degree of cross-hybridization to target mixture. Preferably, n = 0, i.e. there is no spacer between the 2 miRNA probe sequence stretches.

Figure 7:

Elongation element
A capture probe, e.g. for use in a RAKE or MPEA assay as shown in Figures 3 and 4 may include an elongation element. The elongation element comprises a nucleotide sequence with N= 0-30 nucleotides chosen on the basis of showing low complementarity to potential target sequences, therefore resulting in no to low degree of cross-hybridization to target mixture. Preferred is a homomeric sequence stretch -N_n- with n = 1-30, N = A or C, or T, or G. Especially preferred is a homomeric sequence stretch -Nn- with n = 1-12, N = A or C, or T, or G.

Figure 8:

Pearson Correlation Coefficient depending on the number of elongated nucleotides in capture probes in an MPEA assay.

Figure 9:

Diagram describing the general approach for determining miRNA signatures for use as biomarkers in disease diagnosis.

Figure 10A:

Overview of all miRNAs that are found to be differentially regulated in blood samples of lung

cancer patients, grouped according to their mutual information (MI).

Figure 10B:

Overview of all miRNAs that are found to be differentially regulated in blood samples of lung cancer patients, grouped according to their results in t-tests.

Figure 11A:

Overview of preferred miRNAs that are found to be significantly ($p < 0.1$) differentially regulated in blood samples of lung cancer patients.

Figure 11 B:

Overview of preferred signatures of miRNAs for the diagnosis of lung cancer.

Figure 12:

Expression of some relevant miRNAs. The barchart shows for 15 deregulated miRNAs the median value of cancer samples and normal samples. Here, blue bars correspond to cancer samples while red bars to controls.

Figure 13:

Bar diagrams showing a classification of the accuracy, specificity and sensitivity of the diagnosis of lung cancer based on blood samples using different sizes of subsets of miRNAs. Blue bars represent accuracy, specificity and sensitivity of the diagnosis using the indicated biomarkers and red bars represent the results of the same experiments of random classifications. The relevant value is the population median (horizontal black lines inside the bars).

Fig. 13A: 4 biomarkers: hsa-miR-126, hsa-miR-423-5p, hsa-let-7i and hsa-let-7d;

Fig. 13B: 8 biomarkers: hsa-miR-126, hsa-miR-423-5p, hsa-let-7i; hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, and hsa-miR-19a;

Fig. 13C: 10 biomarkers: hsa-miR-126, hsa-miR-423-5p, hsa-let-7i; hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, and hsa-miR-324-3p;

Fig. 13D: 16 biomarkers: hsa-miR-126, hsa-miR-423-5p, hsa-let-7i; hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a; hsa-miR-574-5p; hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, and has-let-7f;

Fig. 13E: 20 biomarkers: hsa-miR-126, hsa-miR-423-5p, hsa-let-7i; hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a; hsa-miR-574-5p; hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f; hsa-let-7a, hsa-let-7g, hsa-miR-140-3p and hsa-miR-339-5p;

Fig. 13F: 28 biomarkers: hsa-miR-126, hsa-miR-423-5p, hsa-let-7i; hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a; hsa-miR-574-5p; hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f; hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a*, hsa-miR-26b, hsa-miR-604, hsa-miR-423-3p, hsa-miR-93*, and hsa-miR-29a;

Fig. 13G: 40 biomarkers: hsa-miR-126, hsa-miR-423-5p, hsa-let-7i; hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a; hsa-miR-574-5p; hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f; hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a*, hsa-miR-26b, hsa-miR-604, hsa-miR-423-3p, hsa-miR-93*, hsa-miR-29a, hsa-miR-1248, hsa-miR-210, hsa-miR-19b, hsa-miR-453, hsa-miR-126*, hsa-miR-188-3p, hsa-miR-624*, hsa-miR-505*, hsa-miR-425, hsa-miR-339-3p, hsa-miR-668, and hsa-miR-363*.

Figure 14:

Classification of cancer samples versus controls

for two individual miRNAs (miR-126 and miR-196). Blue bars correspond to cancer samples, while red bars correspond to controls.

Figure 15:

Scatterplot of fold quotients of rt-qPCR (x-axis) and microarray experiments (y-axis).

Figure 16:

The mutual information of all miRNAs that have higher information content than the best permutation test (upper red line). The middle red line denotes the 95% quantile of the 1000 permutation tests and the bottom red line the mean of the permutation experiments, corresponding to the background MI.

Figure 17:

Box plots of the classification accuracy, specificity and sensitivity of the set of 24 best miRNAs (obtained with radial basis function support vector machine). These miRNAs allow for the discrimination between blood cells of lung cancer patients and blood cells of controls with an accuracy of 95.4% [94.9%-95.9%], a specificity of 98.1%[97,3%-98.8%], and a sensitivity of 92.5%[91.8%-92.5%]. The permutation tests showed significantly decreased accuracy, specificity and sensitivity with 94.2% [47.2%-51.3%], 56.9%[54.5%-59.3%] and 40.6%[37.9%-43.4%], respectively, providing evidence that the obtained results are not due to an overfit of the statistical model on the miRNA fingerprints.

Example 1

Lung Cancer

1. Material and Methods

1.1 Samples

[0044] Blood samples were obtained with patients' informed consent. The patient samples stem from 17 patients with non-small cell lung carcinoma and normal controls. Normal samples were obtained from 19 different volunteers. More detailed information of patients and controls is given in Table 1.

Table 1: Detailed information on lung cancer patients and healthy control subjects

blood donors	male	female
lung cancer patients		
number	9	8
average age	67.4	60.6
squamous cell lung cancer	3	4
adenocarcinoma	6	1
adenosquamous carcinoma	0	1
broncholaveolar carcinoma	0	1
typical carcinoid	0	1
healthy subjects		
number	7	12
average age	43.3	36.7

(continued)

blood donors	male	female
lung cancer patients		
number	9	8
average age	67.4	60.6
squamous cell lung cancer	3	4
adenocarcinoma	6	1
adenosquamous carcinoma	0	1
broncholaveolar carcinoma	0	1
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healthy subjects		
number	7	12
average age	43.3	36.7

blood donors	male	female
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squamous cell lung cancer	3	4
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adenosquamous carcinoma	0	1
broncholaveolar carcinoma	0	1
typical carcinoid	0	1

(continued)

blood donors	male	female
healthy subjects		
number	7	12
average age	43.3	36.7

1.2 miRNA microarray screening

[0045] Blood of lung cancer patients and volunteers without known disease was extracted in PAXgene Blood RNA tubes (BD, Franklin Lakes, New Jersey USA). For each blood donor, 5 ml of peripheral blood were obtained. Total RNA was extracted from blood cells using the miRNeasy Mini Kit (Qiagen GmbH, Hilden, Germany) and the RNA has been stored at -70°C. Samples were analyzed with the Geniom Realtime Analyzer (GRTA, febit gmbh, Heidelberg, Germany) using the Geniom Biochip miRNA homo sapiens. Each array contains 7 replicates of 866 miRNAs and miRNA star sequences as annotated in the Sanger mirBase 12.0 (Griffiths-Jones, Moxon et al. 2005; Griffiths-Jones, Saini et al. 2008). Sample labelling with Biotin has been carried out either by using the miRVANA™ miRNA Labelling Kit (Applied Biosystems Inc, Foster City, California USA) or by multifluidic-based enzymatic on-chip labelling of miRNAs (MPEA (Vorwerk, Ganter et al. 2008.

[0046] Following hybridization for 16 hours at 42°C the biochip was washed automatically and a program for signal enhancement was processed with the GRTA. The resulting detection pictures were evaluated using the Geniom Wizard Software. For each array, the median signal intensity was extracted from the raw data file such that for each miRNA seven intensity values have been calculated corresponding to each replicate copy of mirBase on the array. Following background correction, the seven replicate intensity values of each miRNA were summarized by their median value. To normalize the data across different arrays, quantile normalization (Bolstad, Irizarry et al. 2003) was applied and all further analyses were carried out using the normalized and background subtracted intensity values.

1.3 Statistical analysis

[0047] After having verified the normal distribution of the measured data, parametric t-tests (unpaired, two-tailed) were carried out for each miRNA separately, to detect miRNAs that show a different behavior in different groups of blood donors. The resulting p-values were adjusted for multiple testing by Benjamini-Hochberg (Hochberg 1988; Benjamini and Hochberg 1995) adjustment. Moreover, the Mutual Information (MI) (Shannon 1984) was computed as a measure to access the diagnostic value of single miRNA biomarkers. To this end, all biomarkers were transformed to z-scores and binned in three bins before the MI values of each biomarker, and the information whether the marker has been measured from a normal or lung cancer sample, was computed. In addition to the single biomarker analysis classification of samples using miRNA patterns was carried out using Support Vector Machines (SVM, (Vapnik 2000)) as implemented in the R (Team 2008) e1071 package. In detail, different kernel (linear, polynomial, sigmoid, radial basis function) Support Vector Machines were evaluated, where the cost parameter was sampled from 0.01 to 10 in decimal powers. The measured miRNA profiles were classified using 100 repetitions of standard 10-fold cross-validation. As a subset selection technique a filter approach based on t-test was applied. In detail, the s miRNAs with lowest p-values were computed on the training set in each fold of the cross validation, where s was sampled from 1 to 866. The respective subset was used to train the SVM and to carry out the prediction of the test samples. As result, the mean accuracy, specificity, and sensitivity were calculated together with the 95% Confidence Intervals (95% CI) for each subset size. To check for overtraining permutation tests were applied. Here the class labels were sampled randomly and classifications were carried out using the permuted class labels. All statistical analyzes were performed using R (Team 2008).

2. Results

2.1 miRNA experiments

[0048] The expression of 866 miRNAs and miRNA star sequences was analyzed in blood cells of 17 patients with NSCLC. As a control blood cells of 19 volunteers without known disease were used (see also Materials and Methods).

[0049] Following RNA isolation and labeling by miRVANA™ miRNA Labeling Kit, the miRNA expression profiles were measured by the Geniom Bioship miRNA homo sapiens in the GRTA (febit gmbh, Heidelberg). Following intensity value computation and quantile normalization of the miRNA profiles (Bolstad, Irizarry et al. 2003), a mean correlation value of 0.97 for technical replicates was determined by using purchased total RNA from Ambion (four heart and four liver replicates). For the biological replicates the different tumor samples were compared between each other and the different normal samples between each other. The biological replicates showed a mean correlation of 0.87 and a variance of 0.009.

2.2 Ruling out the influence of age and gender

[0050] To cross-check that age and gender do not have an influence on our analysis, t-tests were computed for the normal samples. In the case of males versus females there was no statistically significant deregulated miRNA. The most significant miRNA, hsa-miR-423, showed an

adjusted significance level of 0.78.

[0051] To test for the influence of donor age the profiles obtained from samples obtained from the oldest versus youngest patients were compared by splitting the group in half based on age. Here, the most significant miRNA, miR-890, obtained an adjusted p-value of 0.87. As for gender, there were no deregulated miRNAs, thus providing evidence that age and gender do not have a substantial influence on the miRNA profiles.

2.3 Single deregulated miRNAs

[0052] Hypothesis testing was applied to identify miRNAs deregulated in the blood cells of lung cancer patients as compared to the blood cells of the controls. Following verification of an approximately normal distribution, two-tailed unpaired t-tests were performed for each miRNA. The respective p-values were adjusted for multiple testing by the Benjamini-Hochberg approach (Hochberg 1988; Benjamini and Hochberg 1995). In total 27 miRNAs significantly deregulated in blood cells of lung cancer patients as compared to the controls were detected. A complete list of deregulated miRNAs is given in the tables in Figures 10 and 11. The miRNAs that were most significantly deregulated included hsa-miR-126 with a p-value of 0.00003, hsa-let-7d with a p-value of 0.003, hsa-let-7i with a p-value of 0.003, and hsa-miR-423 with a p-value of 0.001 (Figure 1 and Figure 2). Other members of the let-7 family that were also found to be deregulated included hsa-let-7c, hsa-let-7e, hsa-let-7f, hsa-let-7g and hsa-let-7a. Besides miR-423, all above mentioned miRNAs were down-regulated in blood cells of lung cancer patients compared to blood cells of healthy subjects indicating an overall decreased miRNA repertoire.

[0053] To validate the findings, the miRNA profiling was repeated using an enzymatic on-chip labeling technique termed MPEA (Microfluidic-based enzymatic on-chip labeling of miRNAs). For this control experiment, 4 out of the 17 lung cancer patients and 10 of the controls were used. Hereby, 100 differentially regulated miRNAs were detected. The miRNAs that were most significantly deregulated include hsa-miR-1253 with a p-value of 0.001, hsa-miR-126 with a p-value of 0.006, hsa-let-7d with a p-value of 0.006, and hsa-let-7f with a p-value of 0.006. Of the previously identified 27 miRNAs 12 were detected to be significant in the second experiment, while the remaining miRNAs showed increased p-values. The correlation of fold changes was 0.62. Also other members of the let-7 family were confirmed as deregulated in blood cells of lung cancer patients. Furthermore, it was confirmed that the majority of the deregulated miRNAs were down-regulated in patients' blood samples. Here, 62% of the deregulated miRNAs showed decreased intensity values in lung cancer samples.

[0054] As a further control experiment an expression analysis by qRT-PCR was performed. As a test sample the fold changes of has-miR-106b, miR-98, miR-140-3p, let-7d, mir-126, and miR-22 were analyzed in blood cells of eight tumor patients and five controls. The fold quotients detected by the Geniom Biochip experiments agreed very well with the qRT-PCR experiments, as demonstrated by an excellent R^2 value of 0.994. The fold quotients are presented as a scatterplot together with the R^2 value and the regression line in Figure 16.

2.4 Diagnostic value of miRNA biomarkers

[0055] Mutual Information (MI) (Shannon 1984) is an adequate measure to estimate the overall diagnostic information content of single biomarkers (Keller, Ludwig et al. 2006). In the present study, Mutual Information is considered as the reduction in uncertainty about the class labels '0' for controls and '1' for tumor samples due to the knowledge of the miRNA expression. The higher the value of the MI of a miRNA, the higher is the diagnostic content of the respective miRNA.

[0056] The MI of each miRNA with the class labels was computed. First, a permutation test was carried out to determine the background noise of the miRNAs, e.g. the random information content of each miRNA. 1000 miRNAs (with replacements) were randomly selected and the class labels were sampled for each miRNA. These permutation tests yielded a mean MI value of 0.029, a 95% quantile of 0.096 and a value of 0.217 for the highest random MI. Second, the MI values were calculated for the comparison between the miRNAs in blood cells of tumor patients and controls. The overall comparison of the 866 miRNAs yielded significantly increased MI values with a two-tailed p-value of $\leq 10^{-10}$ as shown by an unpaired Wilcoxon Mann-Whitney test (Wilcoxon 1945; Mann and Wilcoxon 1947). The miRNA hsa-miR-361-5p showed the highest MI with a value of 0.446. The miRNAs with the best significance values as computed by the t-test, namely hsa-miR-126 and hsa-miR-98, were also among the miRNAs showing the highest MI values. In total 37 miRNAs with MI values higher than the highest of 1000 permuted miRNAs and 200 miRNAs with MI values higher than the 95% quantile were detected (Figure 16). A complete list of miRNAs, the respective MI and the enrichment compared to the background MI is provided in the table in Figure 10.

2.5 Evaluating complex fingerprints

[0057] Even single miRNAs with highest MI values are not sufficient to differentiate between blood cells of tumor patients as compared to controls with high specificity. For example, the has-miR-126 separates blood cells of tumor patients from blood cells of healthy individuals with a specificity of 68%, only. In order to improve the classification accuracy the predictive power of multiple miRNAs was combined by using statistical learning techniques. In detail, Support Vector Machines with different kernels (linear, polynomial, sigmoid, radial basis function) were applied to the data and a hypothesis test was carried out based subset selection as described in Ma-

terial and Methods. To gain statistical significance 100 repetitions of 10-fold cross validation were carried out. Likewise, 100 repetitions for the permutation tests were computed.

[0058] The best results were obtained with radial basis function Support Vector Machines and a subset of 24 miRNAs. These miRNAs allowed for the discrimination between blood cells of lung tumor patients and blood cells of controls with an accuracy of 95.4% [94.9%-95.9%], a specificity of 98.1% [97.3%-98.8%], and a sensitivity of 92.5% [91.8%-92.5%]. The permutation tests showed significantly decreased accuracy, specificity, and sensitivity with 49.2% [47.2%-51.3%], 56.9% [54.5%-59.3%] and 40.6% [37.9%-43.4%], respectively (Figure 5), providing evidence that the obtained results are not due to an overfit of the statistical model on the miRNA fingerprints.

3. Discussion

[0059] While complex miRNA expression patterns have been reported for a huge variety of human tumors, information there was only one study analyzing miRNA expression in blood cells derived from tumor patients. In the following the present miRNA expression profiling is related to both the miRNA expression in blood cells and in cancer cells of non-small cell lung cancer patients. A significant down-regulation of has-miR-126 was found that was recently detected in blood cells of healthy individuals, but not in blood cells of lung cancer patients (Chen, Ba et al. 2008). Down-regulation of has-miR-126 was also found in lung cancer tissue in this study. Functional studies on has-miR-126 revealed this miRNA as a regulator of the endothelial expression of vascular cell adhesion molecule 1 (VCAM-1), which is an intercellular adhesion molecule expressed by endothelial cells focuses on the identification of miRNAs in serum of patients with cancer and other diseases or healthy controls. Since most miRNAs are expressed in both, serum and blood cells of healthy controls, most serum miRNAs are likely derived from circulating blood cells. Since there was only a weak correlation between the miRNA expression in serum and blood cell, miRNA expression appears to be deregulated in either serum or blood cells of cancer patients. The present experimental example focused on the analysis of miRNA expression in blood cells of non-small cell lung cancer patients and healthy controls. Significant downregulation of has-miR-126 was found that was recently detected in blood cells of healthy individuals, but not in blood cells of lung cancer patients (Harris, YamakuchiChen, Ba et al. 2008). Downregulation of has-miR-126 was also found in lung cancer tissue (Yanaihara, Caplen et al. 2006). Functional studies on has-miR-126 revealed this miRNA as regulator of the endothelial expression of vascular cell adhesion molecule 1 (VCAM-1), which is an intercellular adhesion molecule expressed by endothelial cells (Harris, Yamakuchi et al. 2008). hsa-miR-126 is also reported to be an inhibitor of cell invasion in non-small cell lung cancer cell lines, and down-regulation of this miRNA 126 might be a mechanism of lung cancer cells to evade these inhibitory effects (Crawford, Brawner et al. 2008). Members of the has-let-7 family that were found down-regulated in the present invention were the first miRNAs reported as de-regulated in lung cancer (Johnson, Grosshans et al. 2005). This down-regulation of the let-7 family in lung cancer was confirmed by several independent studies (Takamizawa, Konishi et al. 2004; Stahlhut Espinosa and Slack 2006; Tong 2006; Zhang, Wang et al. 2007; Williams 2008). The present data are also in agreement with a recent study showing the down-regulation of has-let-7a, has-let-7d, has-let-7f, has-let-7g, and has-let-7i in blood cells of lung cancer patients (Chen, Ba et al. 2008). Notably, down-regulation of let-7 in lung cancer was strongly associated with poor clinical outcome (Takamizawa, Konishi et al. 2004). The let-7 family members negatively regulate oncogene RAS (Johnson, Grosshans et al. 2005). The miRNA has-miR-22 that showed a high MI value and up-regulation in the present study, was recently also reported to be up-regulated in blood cells of lung cancer patients (Chen, Ba et al. 2008). The miRNA has-miR-19a that also showed a high MI value and up-regulation in the present study was reported to be up-regulated in lung cancer tissue (Hayashita, Osada et al. 2005; Calin and Croce 2006). In contrast, has-miR-20a, which is significantly down-regulated in the present experiments, was reported as up-regulated in lung cancer tissue (Hayashita, Osada et al. 2005; Calin and Croce 2006). The up-regulation of has-miR-20a was found in small-cell lung cancer cell lines, the present study investigated only NSCLC. In summary, there is a high degree of consistency between miRNA expression found in the peripheral blood cells of lung cancer patients and miRNA expression in lung cancer tissue (Takamizawa, Konishi et al. 2004; Hayashita, Osada et al. 2005; Lu, Getz et al. 2005; Calin and Croce 2006; Stahlhut Espinosa and Slack 2006; Tong 2006; Volinia, Calin et al. 2006; Yanaihara, Caplen et al. 2006; Zhang, Wang et al. 2007; Williams 2008).

[0060] Some of the deregulated miRNAs identified in the present invention are also reported as de-regulated in other cancer entities, e.g. has-miR-346 in gastritic cancer, has-miR-145 in bladder cancer, and has-miR-19a in hepatocellular carcinoma and B-cell leukemia (Alvarez-Garcia and Miska 2005; He, Thomson et al. 2005; Feitelson and Lee 2007; Guo, Huang et al. 2008; Ichimi, Enokida et al. 2009). In addition, miRNAs with high diagnostic potential e.g. high MI value, were found that were not yet related to cancer as for example has-miR-527 or has-mir-361-5p that were both up-regulated in blood cells of lung cancer patients.

[0061] Besides the deregulation of single miRNAs, the overall expression pattern of miRNAs in peripheral blood cells of lung cancer patients were analyzed in comparison to the pattern in blood cells of healthy controls. Recently, Chen et al. (Chen, Ba et al. 2008) reported a high correlation of 0.9205 between miRNA profiles in serum

and miRNA profiles in blood cells, both in healthy individuals. The correlation of the miRNA profiles between serum and blood cells in lung cancer patients were significantly lower (0.4492). These results are indicative of deregulated miRNAs in blood and/or serum of patients and are in agreement with the present data that show the deregulation of miRNAs in the blood cells of lung carcinoma patients. These deregulated miRNAs can be used to differentiate patients with lung cancer from normal controls with high specificity and sensitivity. This is the first evidence for the diagnostic potential of miRNA expression profiles in peripheral blood cells of cancer patients and healthy individuals.

References

[0062]

Alvarez-Garcia, I. and E. A. Miska (2005). "MicroRNA functions in animal development and human disease." Development 132(21): 4653-62.

Benjamini, Y. and Y. Hochberg (1995). "Controlling the false discovery rate: A practical and powerful approach to multiple testing." J R Statist Soc B 57: 289-300.

Bolstad, B. M., R. A. Irizarry, et al. (2003). "A comparison of normalization methods for high density oligonucleotide array data based on variance and bias." Bioinformatics 19(2): 185-93.

Calin, G. A. and C. M. Croce (2006). "MicroRNA-cancer connection: the beginning of a new tale." Cancer Res 66(15): 7390-4.

Calin, G. A. and C. M. Croce (2006). "MicroRNA signatures in human cancers." Nat Rev Cancer 6(11): 857-66.

Chen, X., Y. Ba, et al. (2008). "Characterization of microRNAs in serum: a novel class of biomarkers for diagnosis of cancer and other diseases." Cell Res 18(10): 997-1006.

Crawford, M., E. Brawner, et al. (2008). "MicroRNA-126 inhibits invasion in non-small cell lung carcinoma cell lines." Biochem Biophys Res Commun 373(4): 607-12.

Esquela-Kerscher, A. and F. J. Slack (2006). "Oncomirs - microRNAs with a role in cancer." Nat Rev Cancer 6(4): 259-69.

Feitelson, M. A. and J. Lee (2007). "Hepatitis B virus integration, fragile sites, and hepatocarcinogenesis." Cancer Lett 252(2): 157-70.

Gilad, S., E. Meiri, et al. (2008). "Serum microRNAs are promising novel biomarkers." PLoS ONE 3(9): e3148.

Griffiths-Jones, S., R. J. Grocock, et al. (2006). "miRBase: microRNA sequences, targets and gene nomenclature." Nucleic Acids Res 34(Database issue): D140-4.

Griffiths-Jones, S., S. Moxon, et al. (2005). "Rfam: annotating non-coding RNAs in complete genomes." Nucleic Acids Res 33(Database issue): D121-4.

Griffiths-Jones, S., H. K. Saini, et al. (2008). "miRBase: tools for microRNA genomics." Nucleic Acids Res 36(Database issue): D154-8.

Guo, L., Z. X. Huang, et al. (2008). "Differential Expression Profiles of microRNAs in NIH3T3 Cells in Response to UVB Irradiation." Photochem Photobiol.

Harris, T. A., M. Yamakuchi, et al. (2008). "MicroRNA-126 regulates endothelial expression of vascular cell adhesion molecule 1." Proc Natl Acad Sci USA 105(5): 1516-21.

Hayashita, Y., H. Osada, et al. (2005). "A polycistronic microRNA cluster, miR-17-92, is overexpressed in human lung cancers and enhances cell proliferation." Cancer Res 65(21): 9628-32.

He, L., J. M. Thomson, et al. (2005). "A microRNA polycistron as a potential human oncogene." Nature 435(7043): 828-33.

Henschke, C. I. and D. F. Yankelevitz (2008). "CT screening for lung cancer: update 2007." Oncologist 13(1): 65-78.

Hochberg, Y. (1988). "A sharper bonferroni procedure for multiple tests of significance." Biometrica 75: 185-193.

Ichimi, T., H. Enokida, et al. (2009). "Identification of novel microRNA targets based on microRNA signatures in bladder cancer." Int J Cancer.

Jemal, A., R. Siegel, et al. (2008). "Cancer statistics, 2008." CA Cancer J Clin 58(2): 71-96.

Johnson, S. M., H. Grosshans, et al. (2005). "RAS is regulated by the let-7 microRNA family." Cell 120(5): 635-47.

Keller, A., N. Ludwig, et al. (2006). "A minimally invasive multiple marker approach allows highly efficient detection of meningioma tumors." BMC Bioin-

formatics 7: 539.

Lee, R. C., R. L. Feinbaum, et al. (1993). "The C. elegans heterochronic gene lin-4 encodes small RNAs with antisense complementarity to lin-14." Cell 75(5): 843-54.

Lu, J., G. Getz, et al. (2005). "MicroRNA expression profiles classify human cancers." Nature 435(7043): 834-8.

Mann, H. and F. Wilcoxon (1947). "On a test whether one of two random variables is stochastically larger than the other." Ann Mat Stat 18: 50-60.

Sassen, S., E. A. Miska, et al. (2008). "MicroRNA: implications for cancer." Virchows Arch 452(1): 1-10.

Scott, W. J., J. Howington, et al. (2007). "Treatment of non-small cell lung cancer stage I and stage II: ACCP evidence-based clinical practice guidelines (2nd edition)." Chest 132(3 Suppl): 234S-242S.

Shannon, C. (1984). "A mathematical theory of communication." The Bell System Technical Journal 27: 623-656.

Stahlhut Espinosa, C. E. and F. J. Slack (2006). "The role of microRNAs in cancer." Yale J Biol Med 79(3-4): 131-40.

Takamizawa, J., H. Konishi, et al. (2004). "Reduced expression of the let-7 microRNAs in human lung cancers in association with shortened postoperative survival." Cancer Res 64(11): 3753-6.

Team, R. D. C. (2008). R: A Language and Environment for Statistical Computing.. Vienna, Austria, R Foundation for Statistical Computing.

Tong, A. W. (2006). "Small RNAs and non-small cell lung cancer." Curr Mol Med 6(3): 339-49.

Vapnik, V. (2000). The Nature of Statistical Learning Theory., Springer.

Volinia, S., G. A. Calin, et al. (2006). "A microRNA expression signature of human solid tumors defines cancer gene targets." Proc Natl Acad Sci USA 103(7): 2257-61.

Vorwerk, S., K. Ganter, et al. (2008). "Microfluidic-based enzymatic on-chip labeling of miRNAs." N Biotechnol 25(2-3): 142-9.

Wilcoxon, F. (1945). "Individual comparisons by ranking methods." Biometric Bull 1: 80-83.

Williams, A. E. (2008). "Functional aspects of animal microRNAs." Cell Mol Life Sci 65(4): 545-62.

Yanaihara, N., N. Caplen, et al. (2006). "Unique microRNA molecular profiles in lung cancer diagnosis and prognosis." Cancer Cell 9(3): 189-98.

Zhang, B., X. Pan, et al. (2007). "microRNAs as oncogenes and tumor suppressors." Dev Biol 302(1): 1-12.

Zhang, B., Q. Wang, et al. (2007). "MicroRNAs and their regulatory roles in animals and plants." J Cell Physiol 210(2): 279-89.

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Claims

1. A method of diagnosing lung cancer, comprising the steps

   (a) determining an expression profile of a predetermined set of miRNAs in a biological sample from a patient; and
   (b) comparing said expression profile to a reference expression profile,

   wherein the comparison of said determined expression profile to said reference expression profile allows for the diagnosis of lung cancer, and
   wherein said biological sample is a blood cell sample of peripheral erythrocytes, leukocytes and thrombocytes

2. The method of claim 1, wherein in step (a) miRNA expression is determined from total RNA extracted from the blood cells of a peripheral blood sample.

3. The method of claims 1 or 2,
   wherein the diagnosis comprises determining type, grade, and/or stage of cancer.

4. The method of any one of claims 1 to 3,
   wherein the diagnosis comprises determining survival rate, responsiveness to drugs, and/or monitoring the course of the disease or the therapy, e.g. chemotherapy, staging of the disease, measureing the response of a patient to therapeutic intervention, segmentation of patients suffering from the disease, identifying of a patient who has a risk to develop the disease, predicting/estimating the occurrence, preferably the severity of the occurrence of the disease, predicting the response of a patient with the disease to therapeutic intervention.

5. The method of any one of claims 1-4, wherein the lung cancer is selected from the group consisting of lung, carcinoid, lung pleural mesothelioma and lung squamous cell carcinoma, in particular non-small cell lung carcinoma.

6. The method of any one of claims 1-5, wherein said predetermined set of miRNAs comprises one or more miRNAs known to be differentially expressed in the disease state to be diagnosed.

7. The method of any one of claims 1 to 6, wherein the determination of an expression profile in step (a) comprises nucleic acid hybridization, nucleic acid amplification, polymerase extension, sequencing, mass spectroscopy or any combinations thereof, wherein the nucleic acid hybridization is particularly performed using a solid-phase nucleic acid biochip array, in particular a microarray, a bead-based assay, or in situ hybridization or wherein the nucleic acid amplification method is real-time PCR (RT-PCR).

8. The method of any one of claims 1-7, wherein said predetermined set of miRNAs comprises one or more nucleic acids selected from the group consisting of (a) hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a*, hsa-miR-26b, hsa-miR-604, hsa-miR-423-3p and hsa-miR-93*, or wherein said predetermined set of miRNAs comprises one or more nucleic acids selected from the group consisting of (b) hsa-miR-361-5p, hsa-miR-23b, hsa-miR-126, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, hsa-miR-23a, hsa-miR-1914*, hsa-miR-29c, hsa-miR-505*, hsa-let-7d, hsa-miR-378, hsa-miR-29b, hsa-miR-604, hsa-miR-29b, hsa-let-7b, hsa-miR-299-3p, hsa-miR-423-3p, hsa-miR-18a*, hsa-miR-1909, hsa-let-7c, hsa-miR-15a, hsa-miR-425, hsa-miR-93*, hsa-miR-665, hsa-miR-30e, hsa-miR-339-3p, hsa-miR-1307, hsa-miR-625*, hsa-miR-193a-5p, hsa-miR-130b, hsa-miR-17*, hsa-miR-574-5p and hsa-miR-324-3p.

9. The method of claim 8, wherein said predetermined set of miRNAs includes at least 7, preferably at least 10, 15, 20 or 24, in particular the first mentioned, and most preferably all of the indicated miRNAs.

10. The method of any one of claims 8-9, wherein said predetermined set of miRNAs includes at least the miRNAs hsa-miR-126, hsa-miR-361-5p, hsa-miR-23b, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, and hsa-miR-23a, or wherein said predetermined set of miRNAs includes at least the miRNAs hsa-miR-361-5p, hsa-miR-23b, hsa-miR-126, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, hsa-miR-23a, hsa-miR-1914*, hsa-miR-505*, hsa-miR-29c, hsa-let-7d, hsa-miR-378, and hsa-miR-604, or wherein said predetermined set of miRNAs comprises the nucleic acids hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a* and hsa-miR-26b.

11. The method of any one of claims 1-10, wherein the predetermined set of miRNAs comprises at least 7, 10, 15 or 20, preferably all of the indicated miRNAs, particularly at least 1, 7 ,10 ,15 ,20, 25, 30, 35, 40, 50, 75, 100 of the miRNAs selected from the miRNAs from Fig. 11A and/or at least one miRNA molecule or signature of miRNA molecules shown in Fig. 11B or Fig. 17.

12. Use of a kit according to the method of claims 1-11 for diagnosing lung cancer, the kit comprising

    (a)means for determining an expression profile of a predetermined set of miRNAs in a biological sample from a patient, and
    (b)reference expression profile of said predetermined set of miRNAs in a biological sample from a healthy subject,

    wherein the biological sample is a blood cell sample of peripheral erythrocytes, leukocytes and thrombocytes.

13. The use of claim 12, wherein the kit comprises means for determining one or more miRNAs selected from the group consisting of (a) hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a*, hsa-miR-26b, hsa-miR-604, hsa-miR-423-3p and hsa-miR-93* or comprises means for determining one or more miRNAs selected from the group consisting of (b) hsa-miR-361-5p, hsa-miR-23b, hsa-miR-126, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, hsa-miR-23a, hsa-miR-1914*, hsa-miR-29c, hsa-miR-505*, hsa-let-7d, hsa-miR-378, hsa-miR-29b,

hsa-miR-604, hsa-miR-29b, hsa-let-7b, hsa-miR-299-3p, hsa-miR-423-3p, hsa-miR-18a*, hsa-miR-1909, hsa-let-7c, hsa-miR-15a, hsa-miR-425, hsa-miR-93*, hsa-miR-665, hsa-miR-30e, hsa-miR-339-3p, hsa-miR-1307, hsa-miR-625*, hsa-miR-193a-5p, hsa-miR-130b, hsa-miR-17*, hsa-miR-574-5p and hsa-miR-324-3p.

14. The use of any one of claims 12-13 wherein the kit comprises means for determining the miRNAs hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a* and hsa-miR-26b.

15. Use of a set of oligo- or polynucleotides for diagnosing lung cancer wherein the set of oligo- or polynucleotides comprises the sequences of a set of miRNAs as defined in any one of claims 8-14, and/or the complements thereof.

Patentansprüche

1. Verfahren zur Diagnose von Lungenkrebs umfassend die Schritte:

(a) Ermitteln eines Expressionsprofils eines vorbestimmten Sets von miRNAs in einer biologischen Probe eines Patienten, und
(b) Vergleichen des Expressionsprofils mit einem Referenzexpressionsprofil, wobei der Vergleich des ermittelten Expressionsprofils mit dem Referenzexpressionsprofil die Diagnose von Lungenkrebs ermöglicht und wobei die biologische Probe eine Blutzellprobe von peripheren Erythrozyten, Leukozyten und Thrombozyten ist.

2. Verfahren nach Anspruch 1, wobei in Schritt (a) die miRNA-Expression anhand von Gesamt-RNA ermittelt wird, die aus Blutzellen einer peripheren Blutprobe extrahiert wurde.

3. Verfahren nach Anspruch 1 oder 2, wobei die Diagnose die Ermittlung des Typs, des Grads, und/oder der Stufe des Krebses umfasst.

4. Verfahren nach einem der Ansprüche 1 bis 3, wobei die Diagnose die Ermittlung der Überlebensrate, des Ansprechverhaltens auf Wirkstoffen, und/oder das Überwachen des Verlaufs der Erkrankung oder der Therapie, z.B. Chemotherapie, die Einstufung der Erkrankung, das Messen der Antwort eines Patienten auf therapeutische Maßnahmen, die Segmentierung von Patienten, die an der Krankheit leiden, die Identifizierung eines Patienten, der ein Risiko hat, die Erkrankung zu entwickeln, die Vorhersage/Abschätzung des Auftretens, vorzugsweise den Schweregrad des Auftretens der Erkrankung, die Vorhersage der Antwort eines Patienten mit der Erkrankung auf therapeutische Maßnahmen umfasst.

5. Verfahren nach einem der Ansprüche 1 bis 4, wobei der Lungenkrebs aus der Gruppe bestehend aus Lungenkarzinoid, Pleuramesotheliom der Lunge, und Plattenepithelkarzinom der Lunge, insbesondere nicht-kleinzelligem Lungenkarzinom, ausgewählt ist.

6. Verfahren nach einem der Ansprüche 1 bis 5, wobei das vorbestimmte Set von miRNAs eine oder mehrere miRNAs umfasst, die bekannt ist/sind, dass sie differenziell in dem Erkrankungszustand, der zu diagnostizieren ist, exprimiert wird/werden.

7. Verfahren nach einem der Ansprüche 1 bis 6, wobei die Ermittlung eines Expressionsprofils in Schritt (a) Nukleinsäurehybridisierung, Nukleinsäureamplifikation, Polymeraseverlängerung, Sequenzierung, Massenspektroskopie oder irgendeine Kombination davon umfasst, wobei die Nukleinsäurehybridisierung insbesondere unter Verwendung eines Festphasen-Nukleinsäure-Biochip-Arrays, insbesondere eines Mikroarrays, eines auf Beads basierenden Assays oder einer *in situ* Hybridisierung durchgeführt wird oder wobei das Verfahren der Nukleinsäureamplifikation Real-Time-PCR (RT-PCR) ist.

8. Verfahren nach einem der Ansprüche 1 bis 7, wobei das vorbestimmte Set von miRNAs eine oder mehrere Nukleinsäuren ausgewählt aus der Gruppe bestehend aus (a) hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a*, hsa-miR-26b, hsa-miR-604, hsa-miR-423-3p und hsa-miR-93* umfasst, oder wobei das vorbestimmte Set von miRNAs eine oder mehrere Nukleinsäure ausgewählt aus der Gruppe bestehend aus (b) hsa-miR-361-5p, hsa-miR-23b, hsa-miR-126, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, hsa-miR-23a, hsa-miR-1914*, hsa-miR-29c, hsa-miR-505*, hsa-let-7d, hsa-miR-378, hsa-miR-29b, hsa-miR-604, hsa-miR-29b, hsa-let-7b, hsa-miR-299-3p, hsa-miR-423-3p, hsa-miR-18a*, hsa-miR-1909, hsa-let-7c, hsa-miR-15a, hsa-miR-425, hsa-miR-93*, hsa-miR-665, hsa-miR-30e, hsa-miR-339-3p, hsa-miR-1307, hsa-miR-625*, hsa-miR-193a-5p, hsa-miR-130b, hsa-miR-

17*, hsa-miR-574-5p und hsa-miR-324-3p umfasst.

9. Verfahren nach Anspruch 8, wobei das vorbestimmte Set von miRNAs mindestens 7 miRNAs umfasst, vorzugsweise mindestens 10, 15, 20, oder 24 miRNAs umfasst, insbesondere die zuerst genannten miRNAs umfasst, und am meisten bevorzugt alle der angegebenen miRNAs umfasst.

10. Verfahren nach einem der Ansprüche 8 bis 9, wobei das vorbestimmte Set von miRNAs mindestens die miRNAs hsa-miR-126, hsa-miR-361-5p, hsa-miR-23b, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, und hsa-miR-23a umfasst, oder
wobei das vorbestimmte Set von miRNAs mindestens die miRNAs hsa-miR-361-5p, hsa-miR-23b, hsa-miR-126, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, hsa-miR-23a, hsa-miR-1914*, hsa-miR-505*, hsa-miR-29c, hsa-let-7d, hsa-miR-378, und hsa-miR-604 umfasst, oder
wobei das vorbestimmte Set von miRNAs die Nukleinsäuren hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a* und hsa-miR-26b umfasst.

11. Verfahren nach einem der Ansprüche 1 bis 10, wobei das vorbestimmte Set von miRNAs mindestens 7, 10, 15, oder 20 miRNAs umfasst, vorzugsweise alle der angegebenen miRNAs umfasst, insbesondere mindestens 1, 7, 10, 15, 20, 25, 30, 35, 40, 50, 75, 100 der miRNAs umfasst, die aus den miRNAs von Figur 11A ausgewählt sind, und/oder mindestens ein miRNA Molekül oder eine Signatur von miRNA Molekülen, die in Figur 11B oder in Figur 17 gezeigt sind, umfasst.

12. Verwendung eines Kits gemäß dem Verfahren der Ansprüche 1 bis 11 zur Diagnose von Lungenkrebs, wobei das Kit umfasst:

(a) Mittel zum Ermitteln eines Expressionsprofils eines vorbestimmten Sets von miRNAs in einer biologischen Probe eines Patienten, und
(b) ein Referenzexpressionsprofil des vorbestimmten Sets von miRNAs in einer biologischen Probe eines gesunden Subjekts,

wobei die biologische Probe eine Blutzellprobe von peripheren Erythrozyten, Leukozyten und Thrombozyten ist.

13. Verwendung nach Anspruch 12, wobei das Kit Mittel zum Ermitteln einer oder mehrerer miRNAs ausgewählt aus der Gruppe bestehend aus (a) hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a*, hsa-miR-26b, hsa-miR-604, hsa-miR-423-3p und hsa-miR-93 umfasst, oder Mittel zum Ermitteln einer oder mehrere miRNAs ausgewählt aus der Gruppe bestehend aus (b) hsa-miR-361-5p, hsa-miR-23b, hsa-miR-126, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, hsa-miR-23a, hsa-miR-1914*, hsa-miR-29c, hsa-miR-505*, hsa-let-7d, hsa-miR-378, hsa-miR-29b, hsa-miR-604, hsa-miR-29b, hsa-let-7b, hsa-miR-299-3p, hsa-miR-423-3p, hsa-miR-18a*, hsa-miR-1909, hsa-let-7c, hsa-miR-15a, hsa-miR-425, hsa-miR-93*, hsa-miR-665, hsa-miR-30e, hsa-miR-339-3p, hsa-miR-1307, hsa-miR-625*, hsa-miR-193a-5p, hsa-miR-130b, hsa-miR-17*, hsa-miR-574-5p und hsa-miR-324-3p umfasst.

14. Verwendung nach einem der Ansprüche 12 bis 13, wobei das Kit Mittel zum Ermitteln der miRNAs hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a* und hsa-miR-26b umfasst.

15. Verwendung eines Sets von Oligonukleotiden oder Polynukleotiden zur Diagnose von Lungenkrebs, wobei das Set von Oligonukleotiden oder Polynukleotiden die Sequenzen eines Sets von miRNA, welche in einem der Ansprüche 8 bis 14 definiert sind und/oder die Komplemente davon, umfasst.

Revendications

1. Procédé de diagnostic du cancer du poumon, comprenant les étapes de

(a) détermination d'un profil d'expression d'un ensemble prédéfini d'ARNmi dans un échantillon biologique provenant d'un patient ; et
(b) comparaison dudit profil d'expression à un profil d'expression de référence,

ladite comparaison dudit profil d'expression déterminé audit profil d'expression de référence permettant le diagnostic du cancer du poumon, et
ledit échantillon biologique étant un échantillon de

cellules sanguines d'érythrocytes, de leucocytes et de thrombocytes périphériques.

2. Procédé selon la revendication 1, dans l'étape (a), l'expression des ARNmi étant déterminé à partir d'ARN total extrait de cellules sanguines d'un échantillon de sang périphérique.

3. Procédé selon la revendication 1 ou 2, ledit diagnostic comprenant la détermination du type, du grade et/ou du stade du cancer.

4. Procédé selon l'une quelconque des revendications 1 à 3, ledit diagnostic comprenant la détermination du taux de survie, la réponse aux médicaments et/ou le suivi de l'évolution de la maladie ou de la thérapie, par ex. une chimiothérapie, la détermination du stade de la maladie, la mesure de la réponse d'un patient à une intervention thérapeutique, la segmentation des patients souffrant de la maladie, l'identification d'un patient qui présente un risque de développer la maladie, la prévision/l'estimation de l'occurrence, de préférence de la gravité de l'occurrence de la maladie, la prévision de la réponse d'un patient atteint de la maladie à une intervention thérapeutique.

5. Procédé selon l'une quelconque des revendications 1 à 4, ledit cancer du poumon étant choisi dans le groupe constitué par une tumeur carcinoïde pulmonaire, un mésothéliome pleural pulmonaire, un carcinome pulmonaire à cellules squameuses, en particulier un carcinome pulmonaire à cellules non petites.

6. Procédé selon l'une quelconque des revendications 1 à 5, ledit ensemble prédéfini d'ARNmi comprenant un ou plusieurs ARNmi connus pour être exprimés de manière différentielle dans le stade de maladie à diagnostiquer.

7. Procédé selon l'une quelconque des revendications 1 à 6, ladite détermination d'un profil d'expression dans l'étape (a) comprenant l'hybridation d'acides nucléiques, l'amplification d'acides nucléiques, l'extension par polymérase, le séquençage, la spectroscopie de masse ou toute combinaison de ceux-ci, ladite hybridation d'acides nucléiques étant en particulier effectuée en utilisant un réseau de biopuces à acides nucléiques en phase solide, en particulier un micro-réseau, un test à base de billes, ou une hybridation *in situ* ou ledit procédé d'amplification d'acides nucléiques étant une PCR en temps réel (RT-PCR).

8. Procédé selon l'une quelconque des revendications 1 à 7,
ledit ensemble prédéfini d'ARNmi comprenant un ou plusieurs acides nucléiques choisis dans le groupe constitué par (a) hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR- 574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a*, hsa-miR-26b, hsa-miR-604, hsa-miR-423-3p et hsa-miR-93*, ou ledit ensemble prédéfini d'ARNmi comprenant un ou plusieurs acides nucléiques choisis dans le groupe constitué par (b) hsa-miR-361-5p, hsa-miR-23b, hsa-miR-126, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, hsa-miR-23a, hsa-miR-1914*, hsa-miR-29c, hsa-miR-505*, hsa-let-7d, hsa-miR-378, hsa-miR-29b, hsa-miR-604, hsa-miR-29b, hsa-let-7b, hsa-miR-299-3p, hsa-miR-423-3p, hsa-miR-18a*, hsa-miR-1909, hsa-let-7c, hsa-miR-15a, hsa-miR-425, hsa-miR-93*, hsa-miR-665, hsa-miR-30e, hsa-miR-339-3p, hsa-miR-1307, hsa-miR-625*, hsa-miR-193a-5p, hsa-miR-130b, hsa-miR-17*, hsa-miR-574-5p et hsa-miR-324-3p.

9. Procédé selon la revendication 8, ledit ensemble prédéfini d'ARNmi comprenant au moins 7, de préférence au moins 10, 15, 20 ou 24, en particulier le premier mentionné, et idéalement tous les ARNmi indiqués.

10. Procédé selon l'une quelconque des revendications 8 à 9, ledit ensemble prédéfini d'ARNmi comprenant au moins les ARNmi hsa- miR-126, hsa-miR-361-5p, hsa-miR-23b, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185* et hsa-miR-23a, ou ledit ensemble prédéfini d'ARNmi comprenant au moins les ARNmi hsa-miR-361-5p, hsa-miR-23b, hsa-miR-126, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, hsa-miR-23a, hsa-miR-1914*, hsa-miR-505*, hsa-miR-29c, hsa-let-7d, hsa-miR-378, et hsa-miR-604, ou ledit ensemble prédéfini d'ARNmi comprenant les acides nucléiques hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a* et hsa-miR-26b.

11. Procédé selon l'une quelconque des revendications 1 à 10, l'ensemble prédéfini d'ARNmi comprenant au moins 7, 10, 15 ou 20, de préférence tous les ARNmi indiqués, en particulier au moins 1, 7, 10, 15, 20, 25, 30, 35, 40, 50, 75, 100 des ARNmi choisis parmi les ARNmi de la figure 11A et/ou au moins une molécule d'ARNmi ou une signature de molé-

cules d'ARNmi présentée dans la figure 11B ou la figure 17.

12. Utilisation d'un kit selon le procédé des revendications 1 à 11 pour le diagnostic du cancer du poumon, le kit comprenant

(a) des moyens pour déterminer un profil d'expression d'un ensemble prédéfini d'ARNmi dans un échantillon biologique provenant d'un patient, et
(b) un profil d'expression de référence dudit ensemble prédéfini d'ARNmi dans un échantillon biologique provenant d'un sujet en bonne santé,

ledit échantillon biologique étant un échantillon de cellules sanguines d'érythrocytes, de leucocytes et de thrombocytes périphériques.

13. Utilisation selon la revendication 12, ledit kit comprenant des moyens permettant de déterminer un ou plusieurs ARNmi choisis dans le groupe constitué par (a) hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a*, hsa-miR-26b, hsa-miR-604, hsa-miR-423-3p et hsa-miR-93*, ou comprenant des moyens permettant de déterminer un ou plusieurs ARNmi choisis dans le groupe constitué par (b) hsa-miR-361-5p, hsa-miR-23b, hsa-miR-126, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, hsa-miR-23a, hsa-miR-1914*, hsa-miR-29c, hsa-miR-505*, hsa-let-7d, hsa-miR-378, hsa-miR-29b, hsa-miR-604, hsa-miR-29b, hsa-let-7b, hsa-miR-299-3p, hsa-miR-423-3p, hsa-miR-18a*, hsa-miR-1909, hsa-let-7c, hsa-miR-15a, hsa-miR-425, hsa-miR-93*, hsa-miR-665, hsa-miR-30e, hsa-miR-339-3p, hsa-miR-1307, hsa-miR-625*, hsa-miR-193a-5p, hsa-miR-130b, hsa-miR-17*, hsa-miR-574-5p et hsa-miR-324-3p.

14. Utilisation selon l'une quelconque des revendications 12 à 13, ledit kit comprenant des moyens permettant de déterminer les ARNmi hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a* et hsa-miR-26b.

15. Utilisation d'un ensemble d'oligo- ou de polynucléotides pour le diagnostic du cancer du poumon, ledit ensemble d'oligo- ou de polynucléotides comprenant les séquences d'un ensemble d'ARNmi tels qu'ils sont définis dans l'une quelconque des revendications 8 à 14, et/ou les compléments de celles-ci.

Figure 1

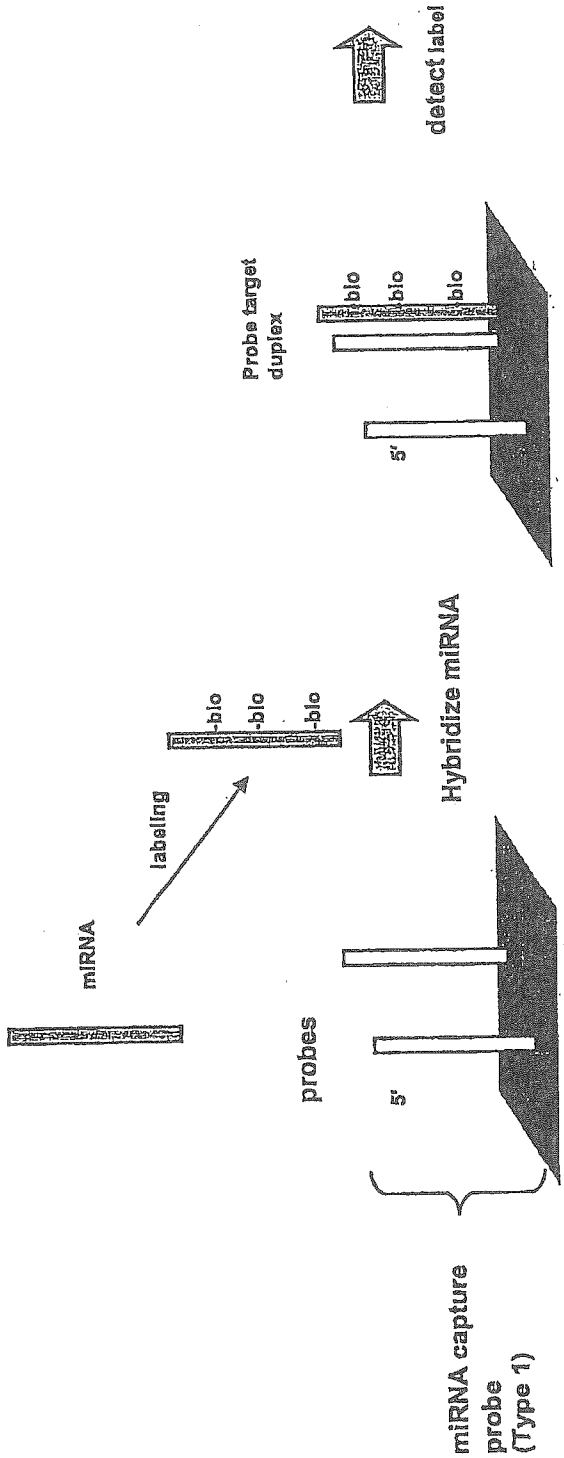

miRNA capture probe (Type 1)
5'
probes
Hybridize miRNA
miRNA
labeling
-bio
-bio
-bio
Probe target duplex
bio
bio
bio
5'
detect label

Figure 2

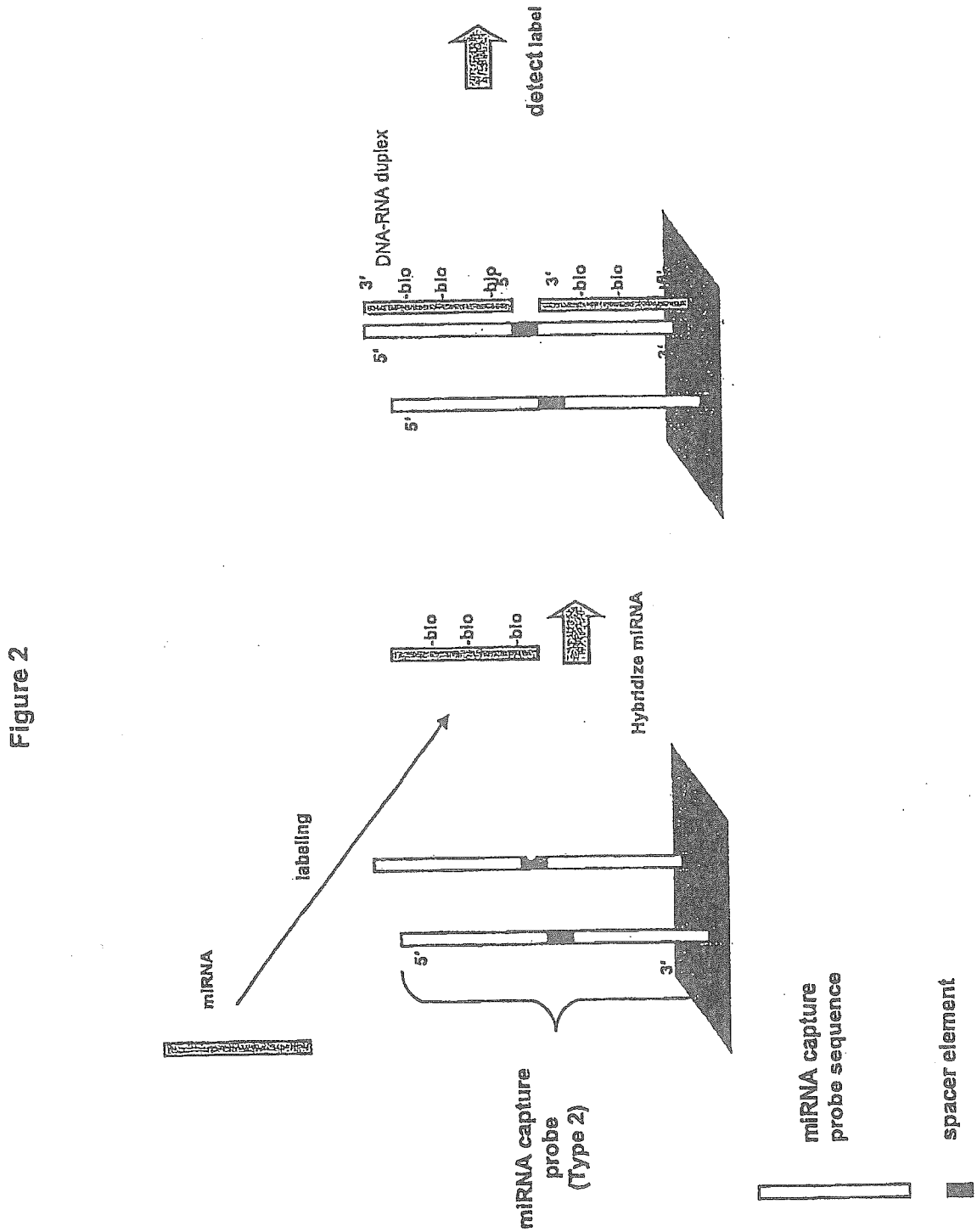

miRNA
labelling
-blo
-blo
-blo
Hybridize miRNA
5'
3'
miRNA capture probe (Type 2)
DNA-RNA duplex
detect label
miRNA capture probe sequence
spacer element

Figure 3

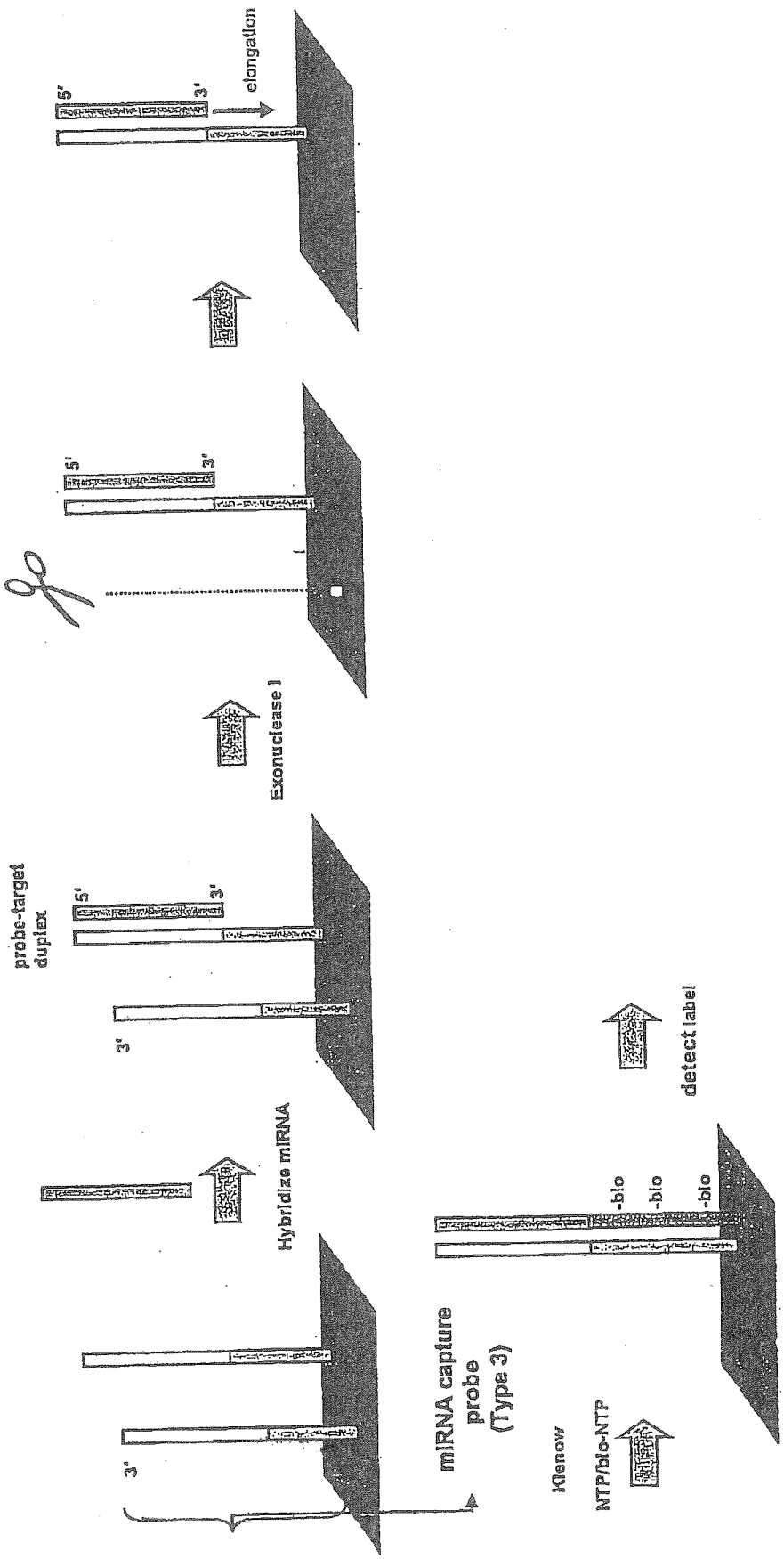

miRNA capture probe (Type 3)
Hybridize miRNA
probe-target duplex
Exonuclease I
elongation
Klenow
NTP/bio-NTP
-bio
-bio
-bio
detect label
5'
3'
3'
5'
3'
5'
3'
3'

Figure 4

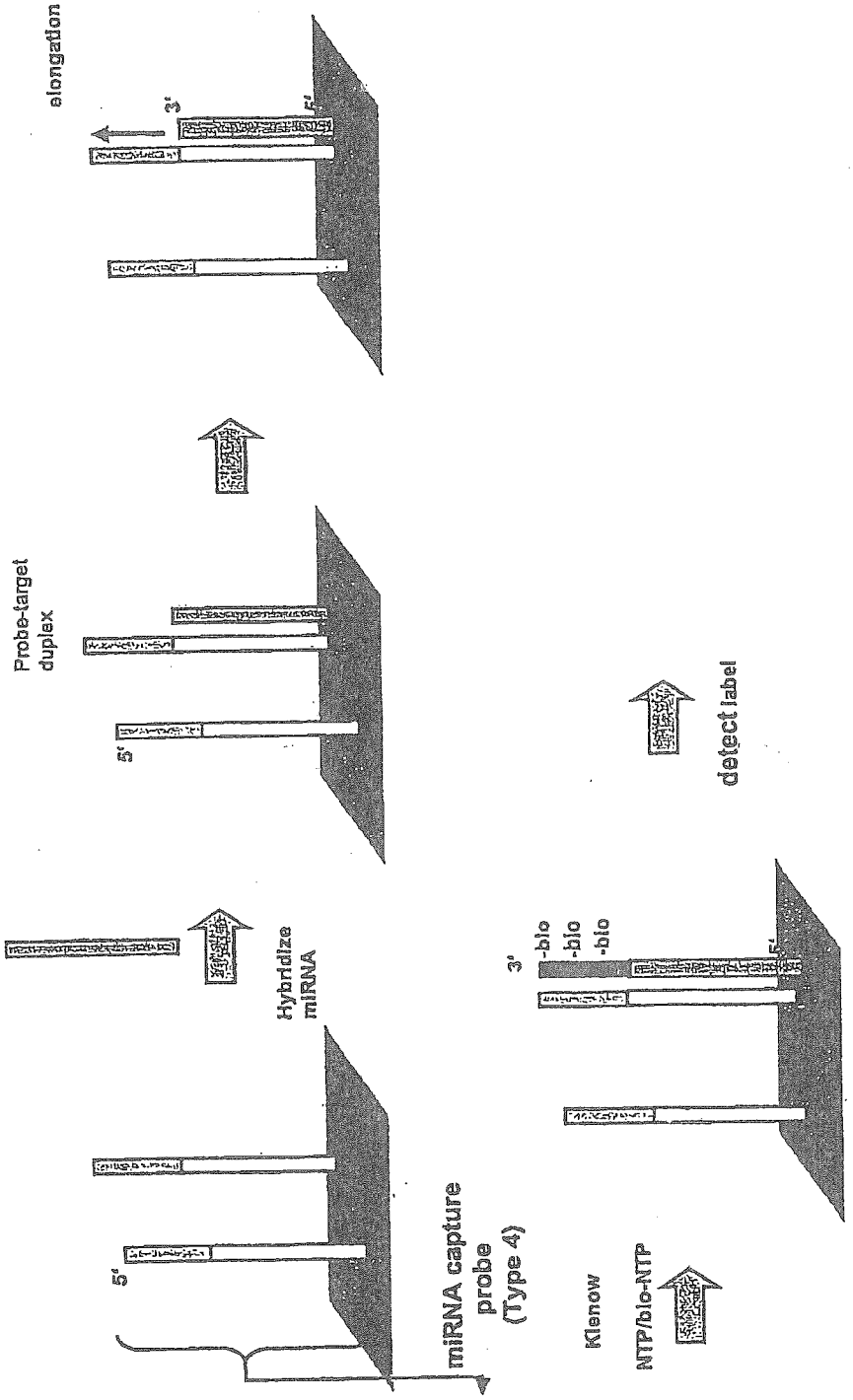

miRNA capture probe (Type 4)
5'
Hybridize miRNA
Probe-target duplex
5'
elongation
3'
5'
Klenow
NTP/bio-NTP
3'
-bio
-bio
-bio
detect label

Figure 5

Example :	human mature miRNA let-7a
ID :	hsa-let-7a
Accession-Nr.:	MIMAT0000062
Sequence:	5'-UGAGGUAGUAGGUUGUAUAGUU-3'

miRNA capture probes :

- Type 1 (miRNA Hybridization Assay)

  surface-3'-ACTCCATCATCCAACATATCAA-5'
  surface-5'-AACTATACAACCTACTACCTCA-3'

- Type 2 (miRNA Tandem Hybridization Assay)

  surface-3'-ACTCCATCATCCAACATATCAA-SP-ACTCCATCATCCAACATATCAA-5'
  surface-5'-AACTATACAACCTACTACCTCA-SP-AACTATACAACCTACTACCTCA-3'

- Type 3 (miRNA RAKE-Assay)

  surface-5'-AACTATACAACCTACTACCTCA-EL-3'

- Type 4 (miRNA MPEA-Assay)

  surface-3'-EL-ACTCCATCATCCAACATATCAA-5'

EP 2 883 966 B1

Figure 6

Type 2 (miRNA Tandem Hybridization Assay)

surface-3'-ACTCCATCATCCAACATATCAA-SP-ACTCCATCATCCAACATATCAA-5'
surface-5'-AACTATACAACCTACTACCTCA-SP-AACTATACAACCTACTACCTCA-3'

With SP :

- nucleotide sequence with n = 0 –12 nucleotides chosen on the basis of showing low complementarity to potential target sequences, therefore resulting in no to low degree of crosshybridisation to target mixture

preferentially : n = 0, no spacer between the 2 miRNA probe sequence stretches

Figure 7

Type 3 (miRNA RAKE-Assay)

surface-5'-AACTATACAACCTACTACCTCA-EL-3'

Type 4 (miRNA MPEA-Assay)

surface-3'-EL-ACTCCATCATCCAACATATCAA-5'

With EL :

- nucleotide sequence with n = 0 – 30 nucleotides chosen on the basis of showing low complementarity to potential target sequences, therefore resulting in no to low degree of crosshybridisation to target mixture

preferentially : homomeric sequence stretch, $-N_n-$ with n = 1-30, N = A or C, or T, or G

especially preferentially homomeric sequence stretch, $-N_n-$ with n = 1-12, N = A or C, or T, or G

Figure 8

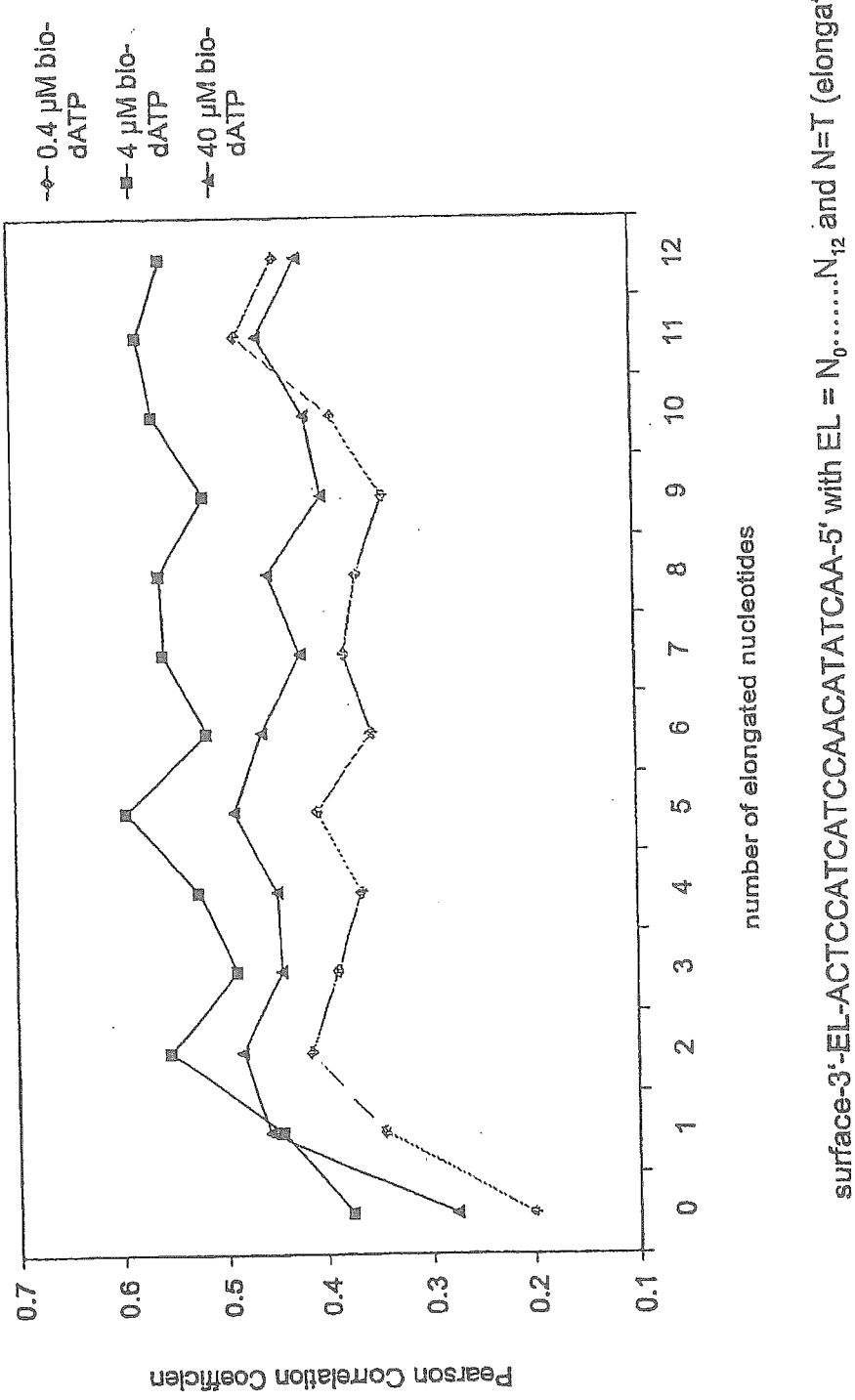

0.4 µM bio-dATP
4 µM bio-dATP
40 µM bio-dATP
Pearson Correlation Coefficien
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1
2
3
4
5
6
7
8
9
10
11
12
number of elongated nucleotides
surface-3'-EL-ACTCCATCATCCAACATATCAA-5' with EL = N0.....N12 and N=T (elongation with bio-ATP)

Figure 9

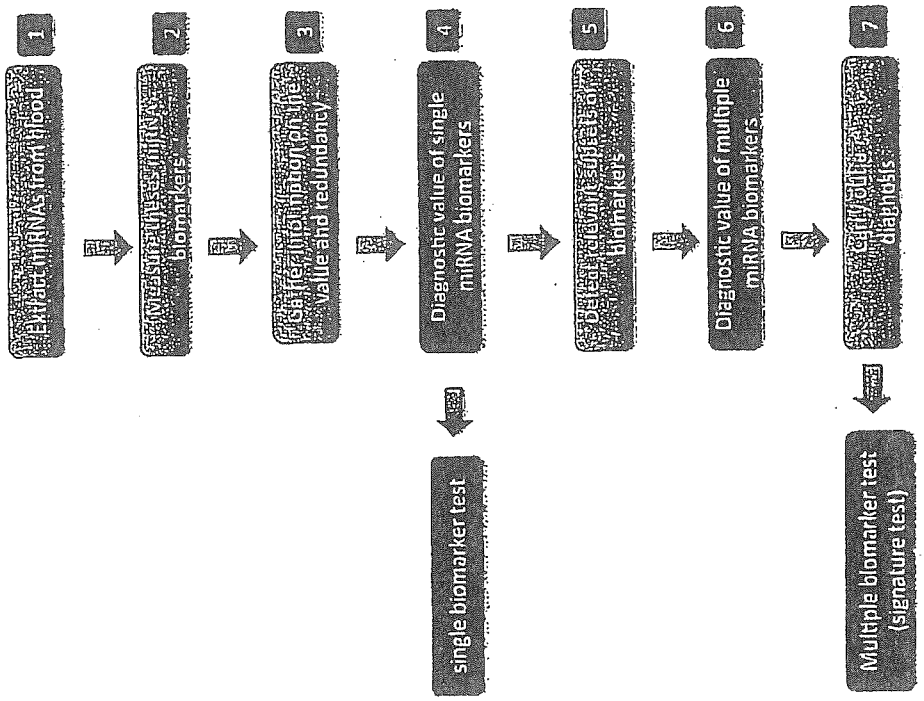

1
2
3
4
5
6
7
single biomarker test
Multiple biomarker test (signature test)

Figure 10A

SEQ ID NO:	NO	microRNA	Sequence	Median Cancer	Median Normal	Fold quotient	Median information
SEQ ID NO: 21	1	hsa-miR-361-5p	uuaucagaaucuccaggguac	606,46	53	11,44	0,45
SEQ ID NO: 118	2	hsa-miR-235*	aucacauugccagggauuacc	3976,97	2099,43	1,89	0,42
SEQ ID NO: 1	3	hsa-miR-126	ucguaccgugaguaauaaugcg	606,46	3428,42	0,18	0,42
SEQ ID NO: 838	4	hsa-miR-527	cugcaaaggaagcccuuuc	74,78	68,44	1,09	0,42
SEQ ID NO: 28	5	hsa-miR-29a	uagcaccaucugaaaucgguua	447	108,56	4,12	0,36
SEQ ID NO: 3	6	hsa-let-7i	ugagguaguaguuugugcuguu	4106,11	6349,31	0,65	0,34
SEQ ID NO: 8	7	hsa-miR-19a	ugugcaaaucuaugcaaaacuga	420,06	1	420,06	0,34
SEQ ID NO: 146	8	hsa-miR-28-5p	aaggagcucacagucuauugag	454,22	108,56	4,18	0,33
SEQ ID NO: 594	9	hsa-miR-185*	agggcuggcuuuccucuggguc	55,56	47,06	1,18	0,31
SEQ ID NO: 147	10	hsa-miR-23a	aucacauugccagggauuucc	3428,42	1797,04	1,91	0,3
SEQ ID NO: 529	11	hsa-miR-1914*	ggagggucccccacuggggagg	249,39	153	1,63	0,3
SEQ ID NO: 409	12	hsa-miR-29c	uagcaccauuugaaaucgguua	340,89	36,11	9,44	0,29
SEQ ID NO: 36	13	hsa-miR-505*	gggagccaggaaguauugaugu	280,11	90,78	3,09	0,29
SEQ ID NO: 4	14	hsa-let-7d	agagguaguagguugcauaguu	6795,89	13307,74	0,51	0,29
SEQ ID NO: 139	15	hsa-miR-378	acuggacuuggagucagaagg	284,22	21,56	13,19	0,29
SEQ ID NO: 156	16	hsa-miR-29b	uagcaccauuugaaaucaguguu	337,83	82,06	4,12	0,29
SEQ ID NO: 25	17	hsa-miR-604	aggcugcggaauucaggac	245	90,78	2,7	0,29
SEQ ID NO: 5	18	hsa-miR-22	aagcugccaguugaagaacugu	7978,5	3868,5	2,06	0,28
SEQ ID NO: 53	19	hsa-let-7b	ugagguaguagguuguguguu	6349,31	9746,17	0,65	0,28
SEQ ID NO: 663	20	hsa-miR-299-3p	uaugugggaugguaaaccgcuu	58,78	55,22	1,06	0,28
SEQ ID NO: 26	21	hsa-miR-423-3p	agcucggucugaggccccucagu	1797,04	463,22	3,88	0,27
SEQ ID NO: 23	22	hsa-miR-18a*	acugcccuaagugcuccuucugg	1040,44	119,89	8,68	0,27
SEQ ID NO: 687	23	hsa-miR-1909	cgcagggcccgggugcucaccg	154,22	132,56	1,16	0,26
SEQ ID NO: 15	24	hsa-let-7c	ugagguaguagguuguauggguu	5660,31	8969,72	0,63	0,26
SEQ ID NO: 6	25	hsa-miR-15a	uagcagcacauaaugguuuugug	3428,42	5944,79	0,58	0,25
SEQ ID NO: 37	26	hsa-miR-425	aaugacacgaucacucccguuga	11838,82	7392,17	1,6	0,25
SEQ ID NO: 27	27	hsa-miR-93*	acugcugagcuagcacuucccg	480,44	30,44	15,78	0,25
SEQ ID NO: 157	28	hsa-miR-665	accaggaggcugaggcccu	212	191,33	1,11	0,25
SEQ ID NO: 50	29	hsa-miR-30e	uguaaacauccuugacuggaag	369,89	129,44	2,86	0,25
SEQ ID NO: 38	30	hsa-miR-339-3p	ugagcgccucgacgaagaccg	209,67	109,67	1,91	0,25
SEQ ID NO: 761	31	hsa-miR-1307	acucggcguggcgucggucgug	82,06	70,67	1,16	0,25
SEQ ID NO: 579	32	hsa-miR-625*	gacuauagaacuuucccccuca	52	21,89	2,38	0,23
SEQ ID NO: 677	33	hsa-miR-193a-5p	ugggucuuugcgggcgagauga	46,89	30,44	1,54	0,23

SEQ ID NO: 622	34	hsa-miR-130b	cagugcaaugaugaaaggcau	388	185,22	2,09	0,23
SEQ ID NO: 734	35	hsa-miR-17*	acugcagugaaggcacuuguag	194	90,78	2,14	0,23
SEQ ID NO: 9	36	hsa-miR-574-5p	ugagugugugugugugagugugu	108,56	30,22	3,59	0,22
SEQ ID NO: 10	37	hsa-miR-324-3p	acugccccaggugcugcugg	1221,94	700,5	1,74	0,22
SEQ ID NO: 358	38	hsa-miR-24	uggcucaguucagcaggaacag	511,89	331,06	1,55	0,21
SEQ ID NO: 688	39	hsa-miR-629	uggguuuacguuugggagaacu	106,11	63,11	1,68	0,21
SEQ ID NO: 605	40	hsa-miR-1323	ucaaaacugaggggcauuuucu	68,22	44	1,55	0,21
SEQ ID NO: 18	41	hsa-let-7g	ugagguaguaguuuguacaguu	3428,42	6795,89	0,5	0,21
SEQ ID NO: 77	42	hsa-miR-1246	aauggauuuuugggagcagg	4915,83	3572,67	1,38	0,21
SEQ ID NO: 131	43	hsa-miR-215	augaccuaugaauugacagac	1085,22	463,22	2,34	0,21
SEQ ID NO: 196	44	hsa-miR-151-3p	cuagacugaagcuccuugagg	344,56	90,78	3,8	0,21
SEQ ID NO: 731	45	hsa-miR-1471	gcccgcugugggagccaggugu	37,89	33,78	1,12	0,21
SEQ ID NO: 109	46	hsa-miR-652	aauggcgccacuaggguugug	1388,26	961,58	1,44	0,21
SEQ ID NO: 41	47	hsa-miR-15b*	cgaaucauuauuugugcucua	46,89	1	46,89	0,21
SEQ ID NO: 30	48	hsa-miR-210	cugugcgugugacagcggcuga	412,67	58,89	7,01	0,21
SEQ ID NO: 20	49	hsa-miR-339-5p	ucccuguccuccaggagcucacg	312,11	12,44	25,08	0,21
SEQ ID NO: 11	50	hsa-miR-20b	caaagugcucauagugcagguag	1118,35	2947,83	0,38	0,2
SEQ ID NO: 716	51	hsa-miR-654-5p	ugguggccgcagaacaugugc	124,11	98,56	1,26	0,2
SEQ ID NO: 719	52	hsa-miR-328	cuggcccucucugcccuuccgu	72,22	68,44	1,06	0,19
SEQ ID NO: 454	53	hsa-miR-659	cuugguucagggaggucccca	150,56	133,11	1,13	0,19
SEQ ID NO: 45	54	hsa-miR-20a	uaaagugcuuauagugcagguag	2319,9	4202,14	0,55	0,19
SEQ ID NO: 16	55	hsa-let-7f	ugagguaguagauuguauagu	5382,15	9746,17	0,55	0,19
SEQ ID NO: 24	56	hsa-miR-26b	uucaaguaauucaggauaggu	1085,22	2058,85	0,53	0,18
SEQ ID NO: 568	57	hsa-miR-298	agcagaagcagggagguucucca	71,56	53,33	1,34	0,18
SEQ ID NO: 787	58	hsa-miR-557	guuugcacgggugggccuugucu	114,67	132	0,87	0,18
SEQ ID NO: 19	59	hsa-miR-140-3p	uaccacaggguagaaccacgg	9312,5	4621,29	2,02	0,18
SEQ ID NO: 849	60	hsa-miR-664*	acuggcuagggaaaaugauuggau	61,56	39,44	1,56	0,18
SEQ ID NO: 7	61	hsa-miR-98	ugagguaguaaguuguauugu	322,44	1440,75	0,22	0,18
SEQ ID NO: 701	62	hsa-miR-1303	uuuagagaccgggcucugcucu	41,89	31,33	1,34	0,18
SEQ ID NO: 698	63	hsa-miR-744	ugcgggcuagggcuaaacagca	364,22	388	0,94	0,18
SEQ ID NO: 134	64	hsa-miR-378*	cuccugacuccaggucccugugu	111,78	28	3,99	0,18
SEQ ID NO: 88	65	hsa-miR-1207-3p	ucagcuggcccucauuuc	1	18,11	0,06	0,18
SEQ ID NO: 33	66	hsa-miR-126*	cauuauuacuuuugguacgcg	1	33,78	0,03	0,18
SEQ ID NO: 70	67	hsa-miR-1288	uggacugcccugaucuggaga	1	1	1	0,18
SEQ ID NO: 47	68	hsa-miR-145*	ggauuccuggaaauacuguucu	1	1	1	0,18
SEQ ID NO: 158	69	hsa-miR-18a	uaaggugcaucuagugcagauag	143,78	58,89	2,44	0,18
SEQ ID NO: 78	70	hsa-miR-338-5p	aacaauauccuggugcugagug	1	1	1	0,18

SEQ ID NO: 46	71	hsa-miR-374a	uuauaauacaaccugauaaagug	225,11	692,94	0,32	0,18
SEQ ID NO: 197	72	hsa-miR-454	uagugcaauauugcuuauagggu	90,44	26,56	3,41	0,18
SEQ ID NO: 71	73	hsa-miR-503	uagcagcgggaacaguucugcag	68,67	73,33	0,94	0,18
SEQ ID NO: 72	74	hsa-miR-563	aggugacauacguuuuccc	1	1	1	0,18
SEQ ID NO: 2	75	hsa-miR-423-5p	ugaggggcagagagcgagacuuu	6795,89	3976,97	1,71	0,17
SEQ ID NO: 89	76	hsa-miR-16	uagcagcacguaaauauuggcg	20349,58	24783,94	0,82	0,17
SEQ ID NO: 846	77	hsa-miR-637	acuggggcuuucgggcucugcgu	90,11	70,89	1,27	0,17
SEQ ID NO: 12	78	hsa-miR-25	cauugcacuugucucggucuga	12517,64	7639,53	1,64	0,17
SEQ ID NO: 342	79	hsa-miR-1182	gaggucuuggagggaugugac	708,06	674,69	1,05	0,17
SEQ ID NO: 159	80	hsa-miR-1224-5p	gugaggacucgggaggugg	586,78	388	1,51	0,17
SEQ ID NO: 636	81	hsa-miR-144*	ggauaucaucauauacuguaag	340,89	450,61	0,76	0,17
SEQ ID NO: 60	82	hsa-miR-361-3p	uccccaggugugaauucgauuu	367,06	256,44	1,43	0,16
SEQ ID NO: 69	83	hsa-miR-151-5p	ucgaggagcucacagucuagu	1732,86	1024,56	1,69	0,16
SEQ ID NO: 14	84	hsa-let-7e	ugagguaggagguuguauaguu	1297,51	2947,83	0,44	0,15
SEQ ID NO: 17	85	hsa-let-7a	ugagguaguagguuguauaguu	6795,89	12517,64	0,54	0,15
SEQ ID NO: 237	86	hsa-miR-194	uguaacagcaacuccaugugga	1853,1	1440,75	1,29	0,15
SEQ ID NO: 376	87	hsa-miR-921	cuagugaggacagaaccaggauuc	260,22	207,33	1,26	0,15
SEQ ID NO: 238	88	hsa-miR-15b	uagcagcacaucaugguuuaca	20349,58	23734,72	0,86	0,15
SEQ ID NO: 7566	89	hsa-miR-187*	ggcuacaacacaggacccgggc	88,56	68,44	1,29	0,14
SEQ ID NO: 51	90	hsa-miR-223	ugucaguuugucaaauacccca	3080,08	5660,31	0,54	0,14
SEQ ID NO: 493	91	hsa-miR-1255a	aggaugagcaaagaaagugagauu	46,44	28,44	1,63	0,14
SEQ ID NO: 110	92	hsa-miR-1256	aggcauugacuucucacuagcu	1	1	1	0,14
SEQ ID NO: 22	93	hsa-miR-1283	ucuacaaaggaaacgcuuucu	2,33	22,22	0,11	0,14
SEQ ID NO: 93	94	hsa-miR-136	acuccauuuguuuugaugaugga	1	1,56	0,64	0,14
SEQ ID NO: 140	95	hsa-miR-143*	ggugcagugcugcaucucuggu	1	1	1	0,14
SEQ ID NO: 98	96	hsa-miR-186*	gcccaaaggugaauuuuuuggg	1	1	1	0,14
SEQ ID NO: 34	97	hsa-miR-188-3p	cucccacaugcaggguuugca	1	4,44	0,23	0,14
SEQ ID NO: 61	98	hsa-miR-19a*	aguuuugcauaguugcacuaca	1	1	1	0,14
SEQ ID NO: 185	99	hsa-miR-208b	auaagacgaacaaaaggguuugu	6,78	1	6,78	0,14
SEQ ID NO: 337	100	hsa-miR-27b*	agagcuuagcugauuggugaac	8,44	4,22	2	0,14
SEQ ID NO: 79	101	hsa-miR-297	auguaugugugcaugugcaug	1	12,11	0,08	0,14
SEQ ID NO: 48	102	hsa-miR-302b	uaaugccuccaugugcaug	1	1	1	0,14
SEQ ID NO: 485	103	hsa-miR-30e*	cuuucagucggauguuuacagc	20,56	8,33	2,47	0,14
SEQ ID NO: 239	104	hsa-miR-342-5p	aggggugcuaucugugauuga	82,44	73,33	1,12	0,14
SEQ ID NO: 62	105	hsa-miR-433	aucaugaugggcuccucggugu	1	1	1	0,14
SEQ ID NO: 32	106	hsa-miR-453	agguugucccuggugagguucgca	6,78	57	0,12	0,14
SEQ ID NO: 343	107	hsa-miR-532-3p	ccucccacacccaaggcuugca	88,11	114,67	0,77	0,14

SEQ ID NO: 54	108	hsa-miR-542-3p	ugugacagauugauaacugaaa	1	18,72	0,05	0,14
SEQ ID NO: 94	109	hsa-miR-548d-3p	caaaaaccacaguuucuuuugc	1	1	1	0,14
SEQ ID NO: 148	110	hsa-miR-645	ucuaggcugguacugcuga	1	1	1	0,14
SEQ ID NO: 149	111	hsa-miR-647	guggcugcacucacuuccuuc	1	1	1	0,14
SEQ ID NO: 73	112	hsa-miR-663b	ggugggcccggccgugcccugagg	5,56	4,44	1,25	0,14
SEQ ID NO: 443	113	hsa-miR-30a	uguaaacauccucgacuggaag	1175,03	1056,33	1,11	0,14
SEQ ID NO: 552	114	hsa-miR-365	uaaugccccuaaaaauccuuau	24	42,78	0,56	0,14
SEQ ID NO: 678	115	hsa-miR-671-3p	uccguuucuagggcucaccc	21,11	13,72	1,54	0,13
SEQ ID NO: 74	116	hsa-let-7d*	cuauacgaccugcugccuuucu	39,44	6	6,57	0,13
SEQ ID NO: 29	117	hsa-miR-1248	accuucuuguauaaagcacugugcuaaa	154,22	31,33	4,92	0,13
SEQ ID NO: 410	118	hsa-miR-1268	cgggcgugguggugggg	901,96	1056,33	0,85	0,13
SEQ ID NO: 99	119	hsa-miR-145	guccaguuuucccaggaaucccu	571,78	101,11	5,66	0,13
SEQ ID NO: 271	120	hsa-miR-198	gguccagaggggagauaggguuc	428,39	382	1,12	0,13
SEQ ID NO: 75	121	hsa-miR-199a-5p	cccaguguucagacuaccuguuc	145,33	36,11	4,02	0,13
SEQ ID NO: 795	122	hsa-miR-323-5p	aggugguccgugcgcguucgc	58,33	67,44	0,86	0,13
SEQ ID NO: 31	123	hsa-miR-19b	ugugcaaauccaugcaaaacuga	3428,42	1853,1	1,85	0,13
SEQ ID NO: 49	124	hsa-miR-106a	aaaagugcuuacagugcagguag	4462,58	6349,31	0,7	0,13
SEQ ID NO: 619	125	hsa-miR-885-3p	aggcagcggguguagugggaua	463,22	1040,44	0,45	0,12
SEQ ID NO: 13	126	hsa-miR-195	uagcagcacagaaauauuggc	2575,72	4462,58	0,58	0,12
SEQ ID NO: 198	127	hsa-miR-101	uacaguacugugauuaacugaa	94,56	138,61	0,68	0,12
SEQ ID NO: 834	128	hsa-miR-130a	cagugcaauguuaaaagggcau	746,29	874,97	0,85	0,12
SEQ ID NO: 67	129	hsa-miR-192	cugaccuaugaauugacagcc	3080,08	1675,67	1,84	0,12
SEQ ID NO: 865	130	hsa-miR-638	agggaucgcgggcgggugggcggccu	4915,83	5944,79	0,83	0,12
SEQ ID NO: 840	131	hsa-miR-1238	cuuccucgucugucugcccc	52	58,89	0,88	0,11
SEQ ID NO: 753	132	hsa-miR-106b	uaaagugcugacagugcagau	3080,08	2319,9	1,33	0,11
SEQ ID NO: 90	133	hsa-miR-1	uggaauguaaagaaguauguau	1	1	1	0,11
SEQ ID NO: 160	134	hsa-miR-10a*	caaauucguaucuagggguaua	1	4,44	0,23	0,11
SEQ ID NO: 63	135	hsa-miR-1200	cucccugagccauucugagccuc	1	5,11	0,2	0,11
SEQ ID NO: 105	136	hsa-miR-1204	ucguggccugucucuuuau	1	4,44	0,23	0,11
SEQ ID NO: 377	137	hsa-miR-1206	uguucauguagauguuuaagc	1	10,44	0,1	0,11
SEQ ID NO: 466	138	hsa-miR-124	uaaggcacgcggugaaugcc	20,56	11,33	1,81	0,11
SEQ ID NO: 68	139	hsa-miR-1245	aagugaucuaaaggccuacau	1	1	1	0,11
SEQ ID NO: 378	140	hsa-miR-1259	auauaugaugacuuagcuuuu	112,44	106,11	1,06	0,11
SEQ ID NO: 240	141	hsa-miR-125b-2*	ucacaagucaggcucuuugggac	1	3,67	0,27	0,11
SEQ ID NO: 80	142	hsa-miR-1261	auggauaaggcuuuggcuu	1	10,44	0,1	0,11
SEQ ID NO: 141	143	hsa-miR-1266	ccucagggcuguagaacagggcu	17,11	29,94	0,57	0,11
SEQ ID NO: 221	144	hsa-miR-1278	uaguaccugugcauaucaucuau	1	1	1	0,11

SEQ ID NO: 241	145	hsa-miR-1297	uucaaguaauucaggug	1	1	1	0,11
SEQ ID NO: 119	146	hsa-miR-1302	uugggacauacuuaugcuaaa	1	1	1	0,11
SEQ ID NO: 318	147	hsa-miR-1304	uuugaggcuacagugagaugug	20,56	28	0,73	0,11
SEQ ID NO: 222	148	hsa-miR-135b	uauggcuuuucauuccuaugaga	1	1	1	0,11
SEQ ID NO: 161	149	hsa-miR-181a*	accaucgaccguugauugaacc	1	1	1	0,11
SEQ ID NO: 685	150	hsa-miR-181c	aacauucaaccugucggugagu	130,44	21,78	5,99	0,11
SEQ ID NO: 199	151	hsa-miR-19b-1*	aguuuugcaggguuugcauccagc	1	1	1	0,11
SEQ ID NO: 489	152	hsa-miR-205	uccuucauuccaccggagucug	1	1	1	0,11
SEQ ID NO: 111	153	hsa-miR-20b*	acuguaguauggggcacuuccag	1	4,44	0,23	0,11
SEQ ID NO: 162	154	hsa-miR-218-2*	caugguucugucaagcaccgcg	1	1	1	0,11
SEQ ID NO: 319	155	hsa-miR-220b	ccaccaccgugucugacacuu	2,67	1	2,67	0,11
SEQ ID NO: 135	156	hsa-miR-221*	accuggcauacaauguagauuu	1	1	1	0,11
SEQ ID NO: 211	157	hsa-miR-23b*	ugggauccuggcaugcugauuu	1	1	1	0,11
SEQ ID NO: 192	158	hsa-miR-24-2*	ugccuacugagcugaaacacag	1	1	1	0,11
SEQ ID NO: 289	159	hsa-miR-28-3p	cacuagauugugagcuccugga	29,11	21,11	1,38	0,11
SEQ ID NO: 150	160	hsa-miR-302b*	acuuuaacaugguugcuuuc	1	1	1	0,11
SEQ ID NO: 86	161	hsa-miR-335*	uuuuucauuauugcuccugacc	1	1,56	0,64	0,11
SEQ ID NO: 136	162	hsa-miR-34b	caaucacuaacuccacugccau	2,67	19,78	0,13	0,11
SEQ ID NO: 163	163	hsa-miR-371-3p	aagugccgccaucuuuugagugu	1	1	1	0,11
SEQ ID NO: 616	164	hsa-miR-374b	auauaauacaaccugcuaagug	126,44	21,56	5,87	0,11
SEQ ID NO: 164	165	hsa-miR-377	aucacacaaaggcaacuuuugu	1	1	1	0,11
SEQ ID NO: 117	166	hsa-miR-411	uaguagaccguauaacgcgaacg	1	1	1	0,11
SEQ ID NO: 112	167	hsa-miR-424*	caaaacgugaggcgcugcuau	34	46,11	0,74	0,11
SEQ ID NO: 530	168	hsa-miR-425*	aucgggaaugucgugucgcccc	98	33,78	2,9	0,11
SEQ ID NO: 120	169	hsa-miR-449a	uggcaguguauuguuagcuggu	1	1	1	0,11
SEQ ID NO: 56	170	hsa-miR-451	aaaccguuaccauuacugaguu	1118,35	4106,11	0,27	0,11
SEQ ID NO: 200	171	hsa-miR-509-5p	uacugcagacaguggcaauca	1	1	1	0,11
SEQ ID NO: 55	172	hsa-miR-516b*	ugcuucuuucagagggu	9,56	31,33	0,3	0,11
SEQ ID NO: 113	173	hsa-miR-517a	aucgugcaucccuuuagagugu	1	1	1	0,11
SEQ ID NO: 64	174	hsa-miR-522	aaaaugguucccuuuagagugu	1	8,33	0,12	0,11
SEQ ID NO: 379	175	hsa-miR-525-5p	cuccagagggaugcacuuucu	1,89	4,22	0,45	0,11
SEQ ID NO: 763	176	hsa-miR-532-5p	caugccuugaguguagaccgu	121,44	92,56	1,31	0,11
SEQ ID NO: 121	177	hsa-miR-548f	aaaaacuguaauuacuuuu	1	1	1	0,11
SEQ ID NO: 96	178	hsa-miR-548h	aaaaguaaucgcgguuuuuguc	1	1	1	0,11
SEQ ID NO: 187	179	hsa-miR-551b	gcgacccauacuugguuucag	1	1	1	0,11
SEQ ID NO: 142	180	hsa-miR-554	gcuaguccugacucagccagu	1	1	1	0,11
SEQ ID NO: 122	181	hsa-miR-597	ugugucacucgaugaccacugu	1	1	1	0,11

SEQ ID NO: 116	182	hsa-miR-599	guugucucaguuuaucaaac	1	1	1	1	0,11
SEQ ID NO: 59	183	hsa-miR-602	gacacgggcgacagcugcggccc	20,56	44	0,47	0,47	0,11
SEQ ID NO: 123	184	hsa-miR-603	cacacacugcaauuacuuuugc	1	1,56	0,64	0,64	0,11
SEQ ID NO: 151	185	hsa-miR-607	guucaaauccagaucuauaac	1	1	1	1	0,11
SEQ ID NO: 107	186	hsa-miR-619	gaccuggacauguuugugcccagu	1	1	1	1	0,11
SEQ ID NO: 143	187	hsa-miR-631	agaccuggcccagaccucagc	2,67	13,72	0,19	0,19	0,11
SEQ ID NO: 234	188	hsa-miR-874	cugcccuggcccgaggaccga	34	35,83	0,95	0,95	0,11
SEQ ID NO: 320	189	hsa-miR-891a	ugcaacgaaccugagccacuga	6,78	6,56	1,03	1,03	0,11
SEQ ID NO: 81	190	hsa-miR-922	gcagcagagaauaggacuacguc	1	18,72	0,05	0,05	0,11
SEQ ID NO: 242	191	hsa-miR-933	ugugcgcagggagaccucuccc	18,11	28,44	0,64	0,64	0,11
SEQ ID NO: 553	192	hsa-miR-99b	caccguagaaccgaccuugcg	73,33	33,56	2,19	2,19	0,11
SEQ ID NO: 106	193	hsa-miR-106b*	ccgcacugugguacuugcugc	901,96	137,56	6,56	6,56	0,11
SEQ ID NO: 42	194	hsa-miR-29c*	ugaccgauuucuccugguguuc	61,11	1	61,11	61,11	0,11
SEQ ID NO: 243	195	hsa-miR-493*	uuguacaugguaggcuuucauu	1,56	3,11	0,5	0,5	0,11
SEQ ID NO: 725	196	hsa-miR-886-5p	cgggucggaguuagcucaagcgg	126,44	87,67	1,44	1,44	0,11
SEQ ID NO: 808	197	hsa-miR-197	uucaccaccuucucccacccagc	143,78	111,78	1,29	1,29	0,1
SEQ ID NO: 639	198	hsa-miR-183	uauggcacugguagaauucacu	90,11	26,56	3,39	3,39	0,1
SEQ ID NO: 526	199	hsa-miR-500	uaauccuugcuaccugggugaga	136,17	58,78	2,32	2,32	0,1
SEQ ID NO: 359	200	hsa-miR-484	ucaggcucaguccccucccgau	3776,89	2575,72	1,47	1,47	0,1
SEQ ID NO: 82	201	hsa-miR-185	uggagagaaaggcaguuccuga	15421,86	13307,74	1,16	1,16	0,1
SEQ ID NO: 39	202	hsa-miR-668	ugucacucggcucggcccacuac	276,44	92,56	2,99	2,99	0,1
SEQ ID NO: 471	203	hsa-miR-936	acaguagagggaggaaucgcag	683,82	660,47	1,04	1,04	0,1
SEQ ID NO: 97	204	hsa-miR-331-3p	gccccugggccuauccuagaa	723,61	403,89	1,79	1,79	0,1
SEQ ID NO: 83	205	hsa-miR-611	gcgaggaccccuggggucugac	30,44	18,11	1,68	1,68	0,1
SEQ ID NO: 723	206	hsa-miR-1469	cucggcgcggggcgcgggcucc	961,58	1297,51	0,74	0,74	0,1
SEQ ID NO: 780	207	hsa-miR-564	aggcacggugucagcaggc	56,78	47,06	1,21	1,21	0,09
SEQ ID NO: 560	208	hsa-miR-103	agcagcauuguacagggcuauga	3868,5	5382,15	0,72	0,72	0,09
SEQ ID NO: 696	209	hsa-miR-1273	gggcgacaaagcaagacuuuucuu	26,44	31,33	0,84	0,84	0,09
SEQ ID NO: 344	210	hsa-miR-181b	aacauucauugcugucggugggu	61,11	27,78	2,2	2,2	0,09
SEQ ID NO: 130	211	hsa-miR-658	ggcggagggaaguagguccguuggu	2425,74	1116,35	2,17	2,17	0,09
SEQ ID NO: 598	212	hsa-miR-125a-3p	acaggugaggguucugggagcc	58,33	39,22	1,49	1,49	0,08
SEQ ID NO: 165	213	hsa-miR-140-5p	cagugguuuuacccuaugguag	1	1	1	1	0,08
SEQ ID NO: 166	214	hsa-miR-301a	cagugcaauaguauugucaaagc	16,78	21,56	0,78	0,78	0,08
SEQ ID NO: 321	215	hsa-miR-1253	agagaagaagaucagccugca	1	1	1	1	0,08
SEQ ID NO: 713	216	hsa-miR-663	aggcggggcgccgcgggaccgc	715,83	1175,03	0,61	0,61	0,08
SEQ ID NO: 223	217	hsa-let-7c*	uagguuacaccgugggaguua	1	1	1	1	0,08
SEQ ID NO: 102	218	hsa-let-7f-1*	cuauacaaucuauugccuuccc	1	1	1	1	0,08

SEQ ID NO: 290	219	hsa-let-7f-2*	cuauacagucuacugucuuucc	1	1	1	1	0,08
SEQ ID NO: 360	220	hsa-miR-103-as	ucauagcccuguacaaugcugcu	1	1	1	1	0,08
SEQ ID NO: 244	221	hsa-miR-105	ucaaaugcucagacuccuguggu	1	1	1	1	0,08
SEQ ID NO: 689	222	hsa-miR-10a	uacccuguagauccgaauuugug	34,22	30,44	1,12	1	0,08
SEQ ID NO: 284	223	hsa-miR-1185	agaggauacccuuuguauguu	1	1	1	1	0,08
SEQ ID NO: 527	224	hsa-miR-1201	agccugauuaaacacaugcucuga	37,89	18,11	2,09	1	0,08
SEQ ID NO: 322	225	hsa-miR-1205	ucugcagggauuugcuuugag	1	1	1	1	0,08
SEQ ID NO: 411	226	hsa-miR-122	uggagugugacaaugguguuug	17,11	21,11	0,81	1	0,08
SEQ ID NO: 124	227	hsa-miR-1247	acccgucccguucgucccccgga	9,56	16,33	0,59	1	0,08
SEQ ID NO: 455	228	hsa-miR-1251	acucuagcugccaaaggcgcu	1	1	1	1	0,08
SEQ ID NO: 212	229	hsa-miR-1262	augguguaauuuguagaaggau	1	11,33	0,09	1	0,08
SEQ ID NO: 629	230	hsa-miR-1270	cuggagauaugguaaggagcugugu	31,56	30,44	1,04	1	0,08
SEQ ID NO: 84	231	hsa-miR-1272	gaugaugauggcagcaaauucugaaa	1	1	1	1	0,08
SEQ ID NO: 167	232	hsa-miR-1277	uacguagauauauauguauuuu	1	1	1	1	0,08
SEQ ID NO: 114	233	hsa-miR-1284	ucuauacagacccuggcuuuuc	1	11,56	0,09	1	0,08
SEQ ID NO: 152	234	hsa-miR-1289	uggaguccaggaaucugcauuuu	1	4,44	0,23	1	0,08
SEQ ID NO: 168	235	hsa-miR-130a*	uucacauugugcuacugucugc	1	1	1	1	0,08
SEQ ID NO: 291	236	hsa-miR-1322	gaugaugcugcugaugcug	1,56	6,56	0,24	1	0,08
SEQ ID NO: 153	237	hsa-miR-1324	ccagacagaauucuauugcacuuuc	1	1	1	1	0,08
SEQ ID NO: 613	238	hsa-miR-133a	uuugguccccuucaaccagcug	34,22	21,11	1,62	1	0,08
SEQ ID NO: 610	239	hsa-miR-135b*	auguaggcuaaaagccauggg	34,22	12,11	2,83	1	0,08
SEQ ID NO: 323	240	hsa-miR-137	uuauugcuuaagaauacgcguag	1	1	1	1	0,08
SEQ ID NO: 245	241	hsa-miR-141	uaacacugucugguaaagaugg	1	1	1	1	0,08
SEQ ID NO: 550	242	hsa-miR-142-5p	cauaaaguagaaaugcacuacu	29,11	10,44	2,79	1	0,08
SEQ ID NO: 201	243	hsa-miR-144	uacaguauagaugauguacu	40,67	82,06	0,5	1	0,08
SEQ ID NO: 224	244	hsa-miR-1468	cuccguuugccuguuucgcug	1	4,22	0,24	1	0,08
SEQ ID NO: 355	245	hsa-miR-146a*	ccucugaaauucaguucuucag	1	1	1	1	0,08
SEQ ID NO: 188	246	hsa-miR-146b-3p	ugcccuguggacucaguucugg	1	1	1	1	0,08
SEQ ID NO: 486	247	hsa-miR-147	guguguggaaaugcuucugc	4	1	4	1	0,08
SEQ ID NO: 132	248	hsa-miR-147b	gugugcggaaaugcuucugcua	1	1	1	1	0,08
SEQ ID NO: 542	249	hsa-miR-149	ucuggcuccgugucuucacucccc	9,56	11,33	0,84	1	0,08
SEQ ID NO: 213	250	hsa-miR-153	uugcauagucacaaaagugauc	1	1	1	1	0,08
SEQ ID NO: 125	251	hsa-miR-1539	uccugcgcgucccagaugccc	5,22	21,11	0,25	1	0,08
SEQ ID NO: 324	252	hsa-miR-154*	aaucauacacggucgaccuauu	1	1	1	1	0,08
SEQ ID NO: 186	253	hsa-miR-16-1*	ccaguauuaacugugccugcuga	1	1,56	0,64	1	0,08
SEQ ID NO: 246	254	hsa-miR-181c*	aaccaucgaccguugagugguggac	1	1	1	1	0,08
SEQ ID NO: 292	255	hsa-miR-1827	ugaggcaguagauugaau	9,56	4,44	2,15	1	0,08

SEQ ID NO: 399	256	hsa-miR-18b	uaaggugcaucuagugcaguuag	137,22	234,33	0,59	0,08	
SEQ ID NO: 126	257	hsa-miR-1911	ugaguaccgccaugucuguuggg	1	1,56	0,64	0,08	
SEQ ID NO: 235	258	hsa-miR-1911*	caccaggccauugugguccucc	1	1	1	0,08	
SEQ ID NO: 169	259	hsa-miR-1912	uacccagagcaugcaguguggaa	1	1,56	0,64	0,08	
SEQ ID NO: 293	260	hsa-miR-192*	cugccaauuccauaggucacag	1	1	1	0,08	
SEQ ID NO: 247	261	hsa-miR-193a-3p	aacuggccuacaaagucccagu	20,83	21,11	0,99	0,08	
SEQ ID NO: 170	262	hsa-miR-193b	aacuggcccucaaaguccccgcu	1	1,56	0,64	0,08	
SEQ ID NO: 115	263	hsa-miR-199b-3p	acaguagucugcacauuggguua	1	11,56	0,09	0,08	
SEQ ID NO: 380	264	hsa-miR-200a*	caucuuaccggacagugcugga	1	1	1	0,08	
SEQ ID NO: 351	265	hsa-miR-200b	uaauacugccugguaaugauga	1	1	1	0,08	
SEQ ID NO: 468	266	hsa-miR-200c	uaauacugccggguaaugaugga	7,44	10,44	0,71	0,08	
SEQ ID NO: 602	267	hsa-miR-212	uaacaguccuccaqucacggcc	7,44	4,44	1,88	0,08	
SEQ ID NO: 171	268	hsa-miR-214*	ugccugucuacacuugcugugc	1	1	1	0,08	
SEQ ID NO: 172	269	hsa-miR-216b	aaaucucugcaggcaaaugaga	1	1	1	0,08	
SEQ ID NO: 285	270	hsa-miR-29b-2*	cugguuucacauggugguccuaag	34,44	47,22	0,73	0,08	
SEQ ID NO: 248	271	hsa-miR-302c	uaagugcuuccauguuucagugg	1	1	1	0,08	
SEQ ID NO: 294	272	hsa-miR-302e	uaaugcuuccaugcuu	1	1	1	0,08	
SEQ ID NO: 173	273	hsa-miR-302f	uaauugcuuccauguuu	1	1	1	0,08	
SEQ ID NO: 273	274	hsa-miR-30d*	cuuucagucagauguuugcugc	1	1	1	0,08	
SEQ ID NO: 127	275	hsa-miR-325	ccuaguaggauguccaguaaugu	1	14,89	0,07	0,08	
SEQ ID NO: 108	276	hsa-miR-34a*	caaucagcaaguauauugcccu	1	1	1	0,08	
SEQ ID NO: 44	277	hsa-miR-34c-3p	aaucacuaaccacacggccagg	4	28,44	0,14	0,08	
SEQ ID NO: 366	278	hsa-miR-369-5p	agaucgaccguguuauauucgc	1	1	1	0,08	
SEQ ID NO: 375	279	hsa-miR-374a*	cuuaucagauuguuauuguaauu	1	1	1	0,08	
SEQ ID NO: 225	280	hsa-miR-374b*	cuuaucaggauguuauuaucauu	1	1	1	0,08	
SEQ ID NO: 494	281	hsa-miR-380*	ugguugaccauagaacaugcgc	1	1	1	0,08	
SEQ ID NO: 282	282	hsa-miR-384	auuccuagaaauuguucaua	1	1	1	0,08	
SEQ ID NO: 128	283	hsa-miR-409-5p	agguuacccgagcaacuuugcau	1	1	1	0,08	
SEQ ID NO: 295	284	hsa-miR-411*	uauguaacacgguccacuaacc	1	1,56	0,64	0,08	
SEQ ID NO: 296	285	hsa-miR-424	cagcagcaauucauguuuuugaa	53	40,78	1,3	0,08	
SEQ ID NO: 190	286	hsa-miR-449b	aggcaguguauuguuagcuggc	1	1	1	0,08	
SEQ ID NO: 274	287	hsa-miR-452*	cucaucugcaaagaaguaagug	1	1	1	0,08	
SEQ ID NO: 249	288	hsa-miR-485-5p	agaggcuggccgugaugaauuc	39,67	50,89	0,78	0,08	
SEQ ID NO: 487	289	hsa-miR-487b	aaucguacagggucauccacuu	20,56	12,11	1,7	0,08	
SEQ ID NO: 250	290	hsa-miR-499-3p	aacaucacagcaagucugugcu	1	1	1	0,08	
SEQ ID NO: 202	291	hsa-miR-508-5p	uacuccagagggcgucacucaug	22,67	31,33	0,72	0,08	
SEQ ID NO: 154	292	hsa-miR-513a-3p	uaaauuucaccuuucugagaaggg	1	1	1	0,08	

SEQ ID NO: 226	293	hsa-miR-514	auugacacuucugugaguaga	1	1	1	0,08	
SEQ ID NO: 193	294	hsa-miR-518f	gaaagcgcuucucuuuagagg	1	1	1	0,08	
SEQ ID NO: 57	295	hsa-miR-519c-3p	aaagugcaucuuuuuagaggau	1	12	0,08	0,08	
SEQ ID NO: 189	296	hsa-miR-520b	aaagugcuucccuuuagagg	1	1	1	0,08	
SEQ ID NO: 214	297	hsa-miR-520e	aaagugcuucccuuuagagg	1	1	1	0,08	
SEQ ID NO: 191	298	hsa-miR-520g	acaaagugcuucccuuuagagugu	1	1	1	0,08	
SEQ ID NO: 345	299	hsa-miR-521	aacgcacuucccuuuagagugu	1	4,44	0,23	0,08	
SEQ ID NO: 174	300	hsa-miR-522*	cucuagagggaagcgcuuucug	4	12,11	0,33	0,08	
SEQ ID NO: 335	301	hsa-miR-523	gaacgcgcuucccuauagagggu	1	1	1	0,08	
SEQ ID NO: 251	302	hsa-miR-545	ucagcaaacauuuauugugugc	1	1	1	0,08	
SEQ ID NO: 275	303	hsa-miR-548b-3p	caagaaccucaguugcuuuugu	1	1	1	0,08	
SEQ ID NO: 252	304	hsa-miR-548b-5p	aaaaguaauugugguuuuuggcc	1	1	1	0,08	
SEQ ID NO: 175	305	hsa-miR-548j	aaaaguaauugcggucuuuggu	1	1	1	0,08	
SEQ ID NO: 253	306	hsa-miR-549	ugacaacuaugcaaugacucu	1	1	1	0,08	
SEQ ID NO: 387	307	hsa-miR-551a	gcgacccacucuuggucuucca	1	1	1	0,08	
SEQ ID NO: 325	308	hsa-miR-555	aggguaagcugaaccucugau	1	1	1	0,08	
SEQ ID NO: 314	309	hsa-miR-558	ugagcugcugugaccaaaaau	1	1	1	0,08	
SEQ ID NO: 95	310	hsa-miR-561	caaaguuuaagauccuugaagu	1	1	1	0,08	
SEQ ID NO: 176	311	hsa-miR-568	auguauaaauguauacacac	1	1	1	0,08	
SEQ ID NO: 203	312	hsa-miR-569	aguuaaugaauccuggaaagu	1	1	1	0,08	
SEQ ID NO: 469	313	hsa-miR-572	guccgcucggcggugggccca	6,78	4,44	1,53	0,08	
SEQ ID NO: 254	314	hsa-miR-576-5p	auucuaauuucuccacgucuuu	1	4,22	0,24	0,08	
SEQ ID NO: 255	315	hsa-miR-577	uagauaaaauauugguaccug	1	1	1	0,08	
SEQ ID NO: 578	316	hsa-miR-581	ucuuguguucucuagaucagu	1	1	1	0,08	
SEQ ID NO: 297	317	hsa-miR-582-3p	uaacugguugaacaacugaacc	4	4,22	0,95	0,08	
SEQ ID NO: 256	318	hsa-miR-583	caaagaggaaggucccauuac	49,56	55,22	0,9	0,08	
SEQ ID NO: 609	319	hsa-miR-584	uuaugguuugccuggacugag	119,89	114,67	1,05	0,08	
SEQ ID NO: 257	320	hsa-miR-587	uuuccauaggugauggagucac	1	1,56	0,64	0,08	
SEQ ID NO: 227	321	hsa-miR-590-3p	uaauuuuauguauaaggauuagu	1	1	1	0,08	
SEQ ID NO: 137	322	hsa-miR-593*	aggcaccagccaggcauugcucagc	1	12,11	0,08	0,08	
SEQ ID NO: 228	323	hsa-miR-606	aaaccuacugaaaaucaaagau	1	1	1	0,08	
SEQ ID NO: 144	324	hsa-miR-609	aggguguuucucucaucucu	1	1	1	0,08	
SEQ ID NO: 341	325	hsa-miR-618	aaacucuacuuguccuucugagu	1	1	1	0,08	
SEQ ID NO: 258	326	hsa-miR-624	cacaagguauugguauuaccu	1	1	1	0,08	
SEQ ID NO: 298	327	hsa-miR-629*	guucucccaacguaaggcccagc	31,56	33,56	0,94	0,08	
SEQ ID NO: 204	328	hsa-miR-636	ugugcuugcucguccccgcccgca	46,89	49,22	0,95	0,08	
SEQ ID NO: 739	329	hsa-miR-641	aaagacauaggauaggagucacccuc	34	21,56	1,58	0,08	

SEQ ID NO: 283	330	hsa-miR-644	aguuggcuuucuuagagc	1	1	1	1	0,08	
SEQ ID NO: 259	331	hsa-miR-646	aagcagcugccucugaggc	1	1	1	1	0,08	
SEQ ID NO: 177	332	hsa-miR-648	aaguugugcagggcacuggu	1	1	1	1	0,08	
SEQ ID NO: 194	333	hsa-miR-649	aaaccuguguuguucaagaguc	1	1	1	1	0,08	
SEQ ID NO: 367	334	hsa-miR-653	guguugaaacaaucucuacug	1	1	1	1	0,08	
SEQ ID NO: 260	335	hsa-miR-655	auaauacaugguuaaccucuuu	1	1	1	1	0,08	
SEQ ID NO: 178	336	hsa-miR-662	ucccacguuguggcccagcag	1	3,11	1	0,32	0,08	
SEQ ID NO: 456	337	hsa-miR-664	uauucauuuauccccagccuaca	8,44	11,33	0,75	0,75	0,08	
SEQ ID NO: 412	338	hsa-miR-7-2*	caacaaaucacagucuaccuaa	13	12,11	1,07	1,07	0,08	
SEQ ID NO: 569	339	hsa-miR-758	uuugugaccuggucccacuaaacc	9,11	14,89	0,61	0,61	0,08	
SEQ ID NO: 368	340	hsa-miR-767-3p	ucugcucauacccaugguuucu	16,78	18,72	0,9	0,9	0,08	
SEQ ID NO: 280	341	hsa-miR-875-5p	uauaccucaguuuuaucaggug	1	1	1	1	0,08	
SEQ ID NO: 261	342	hsa-miR-885-5p	uccauuacacuacccugccucu	5,56	28	0,2	0,2	0,08	
SEQ ID NO: 326	343	hsa-miR-887	gugaacgggcgccaucccgagg	22,67	31,33	0,72	0,72	0,08	
SEQ ID NO: 205	344	hsa-miR-937	auccgcgcucugacucucugcc	4	10,44	0,38	0,38	0,08	
SEQ ID NO: 327	345	hsa-miR-363	aauugcacgguauccaucugua	2790,67	3303,71	0,84	0,84	0,08	
SEQ ID NO: 145	346	hsa-miR-30c	uguaaacauccuacacucucagc	8969,72	4779,31	1,88	1,88	0,08	
SEQ ID NO: 547	347	hsa-miR-148a	ucagugcacuacagaacuuugu	382	901,96	0,42	0,42	0,08	
SEQ ID NO: 101	348	hsa-miR-30b	uguaaacauccuacacucagcu	5530,88	3303,71	1,67	1,67	0,08	
SEQ ID NO: 473	349	hsa-miR-21	uagcuuaucagacugauguuga	708,06	857,3	0,83	0,83	0,08	
SEQ ID NO: 671	350	hsa-miR-1908	cggcgggacggcgauugguc	5944,79	6597,61	0,9	0,9	0,08	
SEQ ID NO: 512	351	hsa-miR-1207-5p	uggcagggaggcuggggagggg	5382,15	4318,58	1,25	1,25	0,08	
SEQ ID NO: 236	352	hsa-miR-1292	ugggaacggguuccggcagacgcug	252,11	158,89	1,59	1,59	0,08	
SEQ ID NO: 179	353	hsa-miR-222	agcuacaucuggcuacugggu	320,78	1	320,78	320,78	0,08	
SEQ ID NO: 786	354	hsa-miR-518a-5p	cugcaaagggaagcccuuuc	55,33	34	1,63	1,63	0,07	
SEQ ID NO: 315	355	hsa-miR-26a	uucaaguaauccaggauaaggcu	8969,72	11137,35	0,81	0,81	0,07	
SEQ ID NO: 864	356	hsa-miR-335	ucaagagcaauaacgaaaaaugu	115,33	67,44	1,71	1,71	0,07	
SEQ ID NO: 778	357	hsa-miR-1301	uugcagcugccugggagugacuuc	22,67	18,11	1,25	1,25	0,07	
SEQ ID NO: 91	358	hsa-miR-1291	ugggcccugacugaagaccagcagu	30,44	1	30,44	30,44	0,07	
SEQ ID NO: 58	359	hsa-miR-1244	aaguagugguuuguauugagauggguu	25,56	1	25,56	25,56	0,07	
SEQ ID NO: 565	360	hsa-miR-1913	ucugccccuccgcugcugcca	34,22	51,56	0,66	0,66	0,06	
SEQ ID NO: 40	361	hsa-miR-363*	cgguuguacacgaugcaauuu	2425,74	723,61	3,35	3,35	0,06	
SEQ ID NO: 155	362	hsa-miR-939	ugggagcugaggcucuggggug	203,17	58,78	3,46	3,46	0,06	
SEQ ID NO: 100	363	hsa-miR-17	caaagugcuuacagugcagguag	3976,97	5242,15	0,76	0,76	0,06	
SEQ ID NO: 381	364	hsa-miR-1293	uggguggucuggagauuugugc	50,56	21,11	2,39	2,39	0,06	
SEQ ID NO: 823	365	hsa-miR-92b*	agggacgggacgcggugcagug	1344,42	2425,74	0,55	0,55	0,06	
SEQ ID NO: 52	366	hsa-miR-1269	cuggacugagccgugcuacugg	4	34,44	0,12	0,12	0,06	

SEQ ID NO: 611	367	hsa-miR-1295	uuaggccgcagaucuggguga	8,44	11,33	0,75	0,06
SEQ ID NO: 848	368	hsa-miR-155	uuaaugcuaaucgugauaggggu	128,44	14,89	8,63	0,06
SEQ ID NO: 299	369	hsa-miR-491-3p	cuuaugcaagauucccuucuac	1	1	1	0,06
SEQ ID NO: 300	370	hsa-miR-519b-3p	aaagugcauccuuuuagagguu	1	1	1	0,06
SEQ ID NO: 65	371	hsa-miR-620f	aaguguccuuuuuagagggcu	1	4,22	0,24	0,06
SEQ ID NO: 35	372	hsa-miR-624*	uaguaccaguaccuuguguuca	1	27,78	0,04	0,06
SEQ ID NO: 215	373	hsa-miR-632	gugucugcuucuguuggga	2,67	4,44	0,6	0,06
SEQ ID NO: 262	374	hsa-miR-194*	ccaguggggcugcuguuaucug	6,78	5,11	1,33	0,06
SEQ ID NO: 637	375	hsa-miR-23a*	ggguuccuggggaugggauuu	74	122,44	0,6	0,06
SEQ ID NO: 138	376	hsa-miR-552	aacaggugacuggauagacaa	4	22,22	0,18	0,06
SEQ ID NO: 577	377	hsa-miR-576-3p	aagauguggaaaaaauuggaauc	1	11,33	0,09	0,06
SEQ ID NO: 133	378	hsa-miR-30d	uguaaacauccccgacuggaag	6349,31	4318,58	1,47	0,06
SEQ ID NO: 538	379	hsa-miR-494	ugaaacauacacgggaaaccuc	20349,58	20349,58	1	0,06
SEQ ID NO: 788	380	hsa-miR-1228*	gugggcgggggcagguguug	5944,79	5802,55	1,02	0,05
SEQ ID NO: 129	381	hsa-miR-182	uuuggcaaugguagaacucacacu	7639,53	5073,69	1,51	0,05
SEQ ID NO: 216	382	hsa-miR-106a*	cugcaauguaagcacuucuuac	1	4,44	0,23	0,05
SEQ ID NO: 301	383	hsa-miR-1197	uaggacacaugcucuaccucu	1	1,56	0,64	0,05
SEQ ID NO: 356	384	hsa-miR-122*	aacgccauuaucacacuaaaua	1	1	1	0,05
SEQ ID NO: 444	385	hsa-miR-1224-3p	ccccaccuccucuccuccag	25,56	67,44	0,38	0,05
SEQ ID NO: 510	386	hsa-miR-124*	cguguucacagcggaccuugau	2,67	1	2,67	0,05
SEQ ID NO: 511	387	hsa-miR-1254	agccuggaagcuggagccugcagu	245	723,61	0,34	0,05
SEQ ID NO: 806	388	hsa-miR-125a-5p	ucccugagacccuuuaaccuguga	82,89	21,56	3,85	0,05
SEQ ID NO: 316	389	hsa-miR-1263	augguacccuggcauacugagu	1	1	1	0,05
SEQ ID NO: 302	390	hsa-miR-127-5p	cugaagcucagagggcucugau	5,56	21,56	0,26	0,05
SEQ ID NO: 630	391	hsa-miR-1271	cuuggcaccuagcaagcacuca	15,78	1,56	10,14	0,05
SEQ ID NO: 770	392	hsa-miR-1285	ucugggcaacaaagugagaccu	300,67	53	5,67	0,05
SEQ ID NO: 303	393	hsa-miR-1286	ugcaggaccaagaugagcccu	12,44	12	1,04	0,05
SEQ ID NO: 180	394	hsa-miR-1287	ugcuggaucagugguucgagucc	1	12,44	0,08	0,05
SEQ ID NO: 548	395	hsa-miR-1294	ugugaggguuggcauuguugucu	29,11	18,72	1,55	0,05
SEQ ID NO: 304	396	hsa-miR-132*	accguggcuuucgauuguuacu	1	1	1	0,05
SEQ ID NO: 92	397	hsa-miR-138-2*	gcuauuucacgaccaccaggguu	1	4,44	0,23	0,05
SEQ ID NO: 328	398	hsa-miR-1537	aaaaccgucuaguuacaguugu	1	1	1	0,05
SEQ ID NO: 413	399	hsa-miR-15a*	caggccauauugugcugccuca	1	1	1	0,05
SEQ ID NO: 589	400	hsa-miR-16-2*	ccaauauuacugugcugcuuua	40,56	30,22	1,34	0,05
SEQ ID NO: 414	401	hsa-miR-181d	aacauucauuguugucggugggu	2,67	2,67	1	0,05
SEQ ID NO: 474	402	hsa-miR-182*	ugguucuagacugccaacua	1	1	1	0,05
SEQ ID NO: 388	403	hsa-miR-196b	uagguaguuuccuguuguugg	1	21,56	0,05	0,05

SEQ ID NO: 438	404	hsa-miR-202*	uuccuaugcauauacuucuuug	1	1	1	1	1	0,05
SEQ ID NO: 430	405	hsa-miR-21*	caacaccagucgauggggcugu	1	1	1	1	1	0,05
SEQ ID NO: 329	406	hsa-miR-219-1-3p	agaguugagucuggaacgucccg	1	1	1	1	1	0,05
SEQ ID NO: 415	407	hsa-miR-219-5p	ugauuguccaaacgcaauucu	1	1	1	1	1	0,05
SEQ ID NO: 330	408	hsa-miR-220a	ccacaccguaucugacacuuu	1	1	1	1	1	0,05
SEQ ID NO: 331	409	hsa-miR-222*	cucaguagccaguguagauccu	1	1	1	1	1	0,05
SEQ ID NO: 263	410	hsa-miR-299-5p	ugguuuaccgucccacauacau	1	1	1	1	1	0,05
SEQ ID NO: 543	411	hsa-miR-300	uauacaagggcagacucucucu	1	1	1	1	1	0,05
SEQ ID NO: 590	412	hsa-miR-301b	cagugcaaugauauugucaaagc	1	1	1	1	1	0,05
SEQ ID NO: 336	413	hsa-miR-302a*	acuuaaacguggauguacuugcu	1	1	1	1	1	0,05
SEQ ID NO: 416	414	hsa-miR-302d	uaaugugcuuccauguuugagugu	1	1	1	1	1	0,05
SEQ ID NO: 217	415	hsa-miR-31*	ugcuaugccaacauauugccau	1	1	1	1	1	0,05
SEQ ID NO: 195	416	hsa-miR-32	uauugcacauuacuaaguugca	1	3,67	0,27	1	1	0,05
SEQ ID NO: 389	417	hsa-miR-32*	caauuuaguguguguauauuu	1	1	1	1	1	0,05
SEQ ID NO: 332	418	hsa-miR-323-3p	cacauuacacggucgaccucu	1	1	1	1	1	0,05
SEQ ID NO: 852	419	hsa-miR-324-5p	cgcaucccccuagggcauuggugu	232,67	56,22	4,14	1	1	0,05
SEQ ID NO: 641	420	hsa-miR-330-3p	gcaaagcacacggccugcagaga	15,33	11,11	1,38	1	1	0,05
SEQ ID NO: 264	421	hsa-miR-337-3p	cuccuauaugaugccuuucuuc	1	4,44	0,23	1	1	0,05
SEQ ID NO: 390	422	hsa-miR-33a	gugcauuguaguugcauugca	1	1	1	1	1	0,05
SEQ ID NO: 305	423	hsa-miR-33b	gugcauugcuguugcauugc	1	1,56	0,64	1	1	0,05
SEQ ID NO: 218	424	hsa-miR-33b*	cagugccucggcagugcagccc	1	1	1	1	1	0,05
SEQ ID NO: 206	425	hsa-miR-346	ugucugcccgcaugccugccucu	1	1	1	1	1	0,05
SEQ ID NO: 417	426	hsa-miR-34a	uggcagugucuuagcugguugu	1	1	1	1	1	0,05
SEQ ID NO: 475	427	hsa-miR-34c-5p	aggcaguguagguuagcugauugc	1	1	1	1	1	0,05
SEQ ID NO: 465	428	hsa-miR-367	aauugcacuuuagcaaugguga	1	1	1	1	1	0,05
SEQ ID NO: 229	429	hsa-miR-369-3p	aauaauacaugguugaucuuu	1	1	1	1	1	0,05
SEQ ID NO: 382	430	hsa-miR-372	aaagugcugcgacauuugagcgu	1	1	1	1	1	0,05
SEQ ID NO: 509	431	hsa-miR-376a	aucauagaggaaaauccacgu	1	3,11	0,32	1	1	0,05
SEQ ID NO: 340	432	hsa-miR-376a*	guagauucuccuucuaugagua	1	1	1	1	1	0,05
SEQ ID NO: 333	433	hsa-miR-376b	aucauagaggaaaauccauguu	1	6,56	0,15	1	1	0,05
SEQ ID NO: 361	434	hsa-miR-380	uauguaauaugguccacaucuu	1	1	1	1	1	0,05
SEQ ID NO: 418	435	hsa-miR-410	aauauaacacagauggccugu	1	1	1	1	1	0,05
SEQ ID NO: 826	436	hsa-miR-422a	acuggacuuagggucagaaggc	166,44	1	166,44	1	1	0,05
SEQ ID NO: 476	437	hsa-miR-429	uaauacugucugguaaaaccgu	1	1	1	1	1	0,05
SEQ ID NO: 281	438	hsa-miR-431*	caggucgucuugcagggcuucu	1	1	1	1	1	0,05
SEQ ID NO: 400	439	hsa-miR-432*	cuggaugguccucccucaugucu	1	1	1	1	1	0,05
SEQ ID NO: 357	440	hsa-miR-450b-3p	uugggaucauuuugcaucccaua	1	1	1	1	1	0,05

SEQ ID NO: 352	441	hsa-miR-455-5p	uaugugccuuuggacuacaucg	1	1	1	1	1	0,05
SEQ ID NO: 230	442	hsa-miR-488	uugaaaggcuauuucuugguc	1	1	1	1	1	0,05
SEQ ID NO: 457	443	hsa-miR-488*	cccagauaauuggcacucucaa	1	1	1	1	1	0,05
SEQ ID NO: 286	444	hsa-miR-489	gugacaucacauauacggcagc	1	1	1	1	1	0,05
SEQ ID NO: 334	445	hsa-miR-490-5p	ccauggauccuccagguguggu	1	4,22	0,24	1	1	0,05
SEQ ID NO: 690	446	hsa-miR-491-5p	agugggaacccuuccaugagg	101,11	96,94	1,04	1	1	0,05
SEQ ID NO: 691	447	hsa-miR-492	aggaccuggcgggacaagaaucuu	88,58	87,67	1,01	1	1	0,05
SEQ ID NO: 265	448	hsa-miR-493	ugaaggucuacuguguguccagg	1	1	1	1	1	0,05
SEQ ID NO: 87	449	hsa-miR-497	cagcagcacacugcuggcuuugu	15,78	39,44	0,4	1	1	0,05
SEQ ID NO: 266	450	hsa-miR-497*	caaaccacaccugcuguguaga	1	1	1	1	1	0,05
SEQ ID NO: 207	451	hsa-miR-506	uaaggcacccuucugagcuaga	1	1	1	1	1	0,05
SEQ ID NO: 401	452	hsa-miR-509-3p	ugauuggucgucuguggguag	1,89	1,56	1,21	1	1	0,05
SEQ ID NO: 442	453	hsa-miR-511	guguuuuugccucugcaguca	1	1	1	1	1	0,05
SEQ ID NO: 531	454	hsa-miR-515-3p	gagugccuucuuuuggagcguu	1	1	1	1	1	0,05
SEQ ID NO: 369	455	hsa-miR-516a-3p	ugcuccuuucagagggu	1	1	1	1	1	0,05
SEQ ID NO: 782	456	hsa-miR-518b	caaagcgcuccccuuagaggu	20,56	4,44	4,63	1	1	0,05
SEQ ID NO: 267	457	hsa-miR-519a	aaagugcauccuuuuagagugu	1	1	1	1	1	0,05
SEQ ID NO: 595	458	hsa-miR-519d	caaagugccucccuuagagug	1	1	1	1	1	0,05
SEQ ID NO: 516	459	hsa-miR-520a-3p	aaagugcuucccuuuggacugu	1	1	1	1	1	0,05
SEQ ID NO: 370	460	hsa-miR-520c-3p	aaagugcuucuuuuagagggu	1	1	1	1	1	0,05
SEQ ID NO: 445	461	hsa-miR-525-3p	gaaggcgcuucccuuuagagcg	1	1	1	1	1	0,05
SEQ ID NO: 346	462	hsa-miR-545*	ucaguaaauguuuauuagauga	1	1	1	1	1	0,05
SEQ ID NO: 383	463	hsa-miR-548a-5p	aaaaguaauugcgaguuuuacc	1	1	1	1	1	0,05
SEQ ID NO: 391	464	hsa-miR-548d-5p	aaaaguaauugugguuuuugcc	1	1	1	1	1	0,05
SEQ ID NO: 458	465	hsa-miR-548g	aaaacuguaauuacuuuuguac	1	1	1	1	1	0,05
SEQ ID NO: 384	466	hsa-miR-548k	aaaaguacuugcggauuuugcu	1	1	1	1	1	0,05
SEQ ID NO: 472	467	hsa-miR-548n	caaaaguaauugugguauuugu	1	1	1	1	1	0,05
SEQ ID NO: 699	468	hsa-miR-550	agugccugagggaguaagaggccc	136,17	90,78	1,5	1	1	0,05
SEQ ID NO: 306	469	hsa-miR-553	aaaacggugagauuuuguuuu	1	1	1	1	1	0,05
SEQ ID NO: 365	470	hsa-miR-556-5p	gaugagucaauuguaauauugag	1	1	1	1	1	0,05
SEQ ID NO: 287	471	hsa-miR-566	ggggcgcugugauccccaac	1	1	1	1	1	0,05
SEQ ID NO: 507	472	hsa-miR-567	aguaugucuuccaggacagaac	1	1	1	1	1	0,05
SEQ ID NO: 449	473	hsa-miR-570	cgaaaacagcaauuaccuuugc	1	1	1	1	1	0,05
SEQ ID NO: 632	474	hsa-miR-574-3p	cacgcucaugcacacacccaca	48	58,78	0,82	1	1	0,05
SEQ ID NO: 517	475	hsa-miR-585	ugggcguaucuguaugcua	1	1	1	1	1	0,05
SEQ ID NO: 453	476	hsa-miR-590-5p	gagcuuauucauaaaaguugcag	1	1	1	1	1	0,05
SEQ ID NO: 338	477	hsa-miR-591	agaccauggguucucauugu	1	1	1	1	1	0,05

SEQ ID NO: 596	478	hsa-miR-605	uaaauccCauggugccuucuccu	6,78	3,67	1,85	0,05	
SEQ ID NO: 557	479	hsa-miR-612	gcugggcagggcuucugagcuccuu	24,56	33,44	0,73	0,05	
SEQ ID NO: 448	480	hsa-miR-615-3p	uccgagccugggucuccccucuu	1	1	1	0,05	
SEQ ID NO: 392	481	hsa-miR-616	agucauuggagggguuugagcag	27	30,44	0,89	0,05	
SEQ ID NO: 405	482	hsa-miR-617	agacuucccauuugaaggugggc	2,67	4,44	0,6	0,05	
SEQ ID NO: 307	483	hsa-miR-620	auggagauagauauagaaau	1	1,56	0,64	0,05	
SEQ ID NO: 607	484	hsa-miR-628-3p	ucuaguaaagaguggcagucga	49,56	34,44	1,44	0,05	
SEQ ID NO: 477	485	hsa-miR-628-5p	augcugacauauuuacuagagg	1	1	1	0,05	
SEQ ID NO: 350	486	hsa-miR-635	acuugggcacugaaacaaugucc	1	1	1	0,05	
SEQ ID NO: 431	487	hsa-miR-657	ggcaggguucucacccuucuagg	1	1	1	0,05	
SEQ ID NO: 824	488	hsa-miR-660	uacccauugcauaucggaguug	130,44	57	2,29	0,05	
SEQ ID NO: 518	489	hsa-miR-675b	cuguaugcccucaccgcuca	4	4,44	0,9	0,05	
SEQ ID NO: 308	490	hsa-miR-708	aaggagcuuacaaucuagcuggg	1	1	1	0,05	
SEQ ID NO: 371	491	hsa-miR-708*	caacuagacugugagcuucuag	1	1	1	0,05	
SEQ ID NO: 599	492	hsa-miR-744*	cuguugccacuaaccucaaccu	15,33	11,33	1,35	0,05	
SEQ ID NO: 459	493	hsa-miR-802	caguaacaaagauucauccuugu	1	1	1	0,05	
SEQ ID NO: 353	494	hsa-miR-876-3p	ugguguuuacaaaguaauuca	1	1	1	0,05	
SEQ ID NO: 393	495	hsa-miR-876-5p	uggauuucuuugugaaucacca	1	1	1	0,05	
SEQ ID NO: 339	496	hsa-miR-888	uacucaaaaagccugucaguca	1	1	1	0,05	
SEQ ID NO: 181	497	hsa-miR-891b	ugcaacuuaccugagucauuga	1	1	1	0,05	
SEQ ID NO: 309	498	hsa-miR-892b	cacuggcuccuuucuggguaga	1	1	1	0,05	
SEQ ID NO: 406	499	hsa-miR-9	ucuuugguuaucagcuguauga	1	1	1	0,05	
SEQ ID NO: 347	500	hsa-miR-9*	auaaagcuagauaaccgaaagu	1	1	1	0,05	
SEQ ID NO: 372	501	hsa-miR-924	agagucuugugaugucuugc	1	1	1	0,05	
SEQ ID NO: 272	502	hsa-miR-934	ugucuacuacuggagacacugg	1	1	1	0,05	
SEQ ID NO: 519	503	hsa-miR-943	cugacuguugccgucccuccag	1	1	1	0,05	
SEQ ID NO: 398	504	hsa-miR-96*	aaucaugugcagugccaauaug	1	1	1	0,05	
SEQ ID NO: 268	505	hsa-miR-99a*	caagcucgcuucuaugggucug	1	1	1	0,05	
SEQ ID NO: 220	506	hsa-miR-99b*	caagcucgugucuguggguccg	1	1	1	0,05	
SEQ ID NO: 450	507	hsa-miR-320a	aaaagcuggguugagagggcga	10047,96	8310,31	1,21	0,05	
SEQ ID NO: 231	508	hsa-miR-128	ucacagugaaccggucucuuu	773,97	21,56	35,91	0,05	
SEQ ID NO: 269	509	hsa-miR-1280	ucccaccgcugccaccc	237,33	158,89	1,49	0,05	
SEQ ID NO: 478	510	hsa-miR-29a*	acugauuucuuuugguguucag	2,22	1	2,22	0,05	
SEQ ID NO: 419	511	hsa-miR-33a*	caauguuuccacagugcaucac	1	1	1	0,05	
SEQ ID NO: 232	512	hsa-miR-362-5p	aauccuugGaaccuaggugugagu	260,22	14,89	17,48	0,05	
SEQ ID NO: 479	513	hsa-miR-370	gccugcuggggugGagaccuggu	194	156,56	1,24	0,05	
SEQ ID NO: 420	514	hsa-miR-502-3p	aaugcaccuggGcaaggauuca	364,22	14,89	24,46	0,05	

SEQ ID NO: 43	515	hsa-miR-550*	uguucuuacucccucaggcacau	331,06	5,11	64,77	0,05	
SEQ ID NO: 276	516	hsa-miR-586	uaugcauuguauuuuuaggucc	1	1	1	0,05	
SEQ ID NO: 432	517	hsa-miR-651	uuuaggauaaagcuugacuuuug	1	1	1	0,05	
SEQ ID NO: 433	518	hsa-miR-765	uggaggagaaggaaggugaug	1085,22	1101,78	0,98	0,05	
SEQ ID NO: 505	519	hsa-miR-942	ucuucucuguuuuggccaugug	52	18,11	2,87	0,05	
SEQ ID NO: 668	520	hsa-miR-125b-1*	acggguuaggcucuuggggagcu	49,56	56,22	0,88	0,05	
SEQ ID NO: 544	521	hsa-miR-1826	auugaucaucgacacuucgaacgcaau	35853,42	35853,42	1	0,05	
SEQ ID NO: 182	522	hsa-miR-342-3p	ucucacacagaaaucgcacccgu	3428,42	2319,9	1,48	0,05	
SEQ ID NO: 711	523	hsa-miR-513c	uucucaaggaggucgcuuuau	68,67	45,11	1,52	0,04	
SEQ ID NO: 495	524	hsa-miR-1275	guggggagaggcuguc	1146,69	901,96	1,27	0,04	
SEQ ID NO: 460	525	hsa-miR-542-5p	ucgggaucaucaugucacgaga	6,78	1	6,78	0,04	
SEQ ID NO: 692	526	hsa-miR-516a-5p	uucucgaggaaagaagcaccuuuc	39,67	58,78	0,67	0,04	
SEQ ID NO: 843	527	hsa-miR-524-5p	cuacaaagggaagcacuuucuc	31,11	29,44	1,06	0,04	
SEQ ID NO: 627	528	hsa-miR-923	gucagcggagggaaaagaaacu	24783,94	20349,58	1,22	0,04	
SEQ ID NO: 277	529	hsa-miR-92b	uauugcacucgucccggccucc	4260,36	5530,88	0,77	0,04	
SEQ ID NO: 85	530	hsa-miR-1299	uucuggaauucugugugaggga	1	29,94	0,03	0,04	
SEQ ID NO: 720	531	hsa-miR-146b-5p	ugagaacugaauuccauaggcu	92,56	67,44	1,37	0,04	
SEQ ID NO: 437	532	hsa-miR-302a	uaagugcuuccauguuuugguga	1	1	1	0,04	
SEQ ID NO: 208	533	hsa-miR-379*	uauguaacaugguccacuaacu	1	1,56	0,64	0,04	
SEQ ID NO: 394	534	hsa-miR-508-3p	ugauuguagccuuuuggaguaga	1	1	1	0,04	
SEQ ID NO: 183	535	hsa-miR-512-3p	aagugcugucauagccugaggguc	1	1	1	0,04	
SEQ ID NO: 278	536	hsa-miR-517b	ucgugucaucccuuuagaguguu	1	1	1	0,04	
SEQ ID NO: 310	537	hsa-miR-520h	acaaagugcuucccuuuagagu	1	1	1	0,04	
SEQ ID NO: 279	538	hsa-miR-548a-3p	caaaacuggcaauuacuuuugc	1	1	1	0,04	
SEQ ID NO: 210	539	hsa-miR-579	uucauuugguauaaaccgcgaau	1	1	1	0,04	
SEQ ID NO: 839	540	hsa-miR-877*	uccucuucuccccucccucccag	20,83	21,11	0,99	0,04	
SEQ ID NO: 488	541	hsa-miR-888*	gacugacaccucuuuggggugaa	1	6,56	0,15	0,04	
SEQ ID NO: 103	542	hsa-miR-1305	uuuucaacucuaaauggggagaga	1	3,67	0,27	0,04	
SEQ ID NO: 354	543	hsa-miR-373*	acucaaaauggggcgcuuuccc	79,67	116,33	0,68	0,04	
SEQ ID NO: 421	544	hsa-miR-379	ugguagacuauggaacguagg	25,56	39,22	0,65	0,04	
SEQ ID NO: 836	545	hsa-miR-432	ucuuggaguaggucauugggugg	41,89	39,22	1,07	0,04	
SEQ ID NO: 693	546	hsa-miR-510	uacucaggaggugggcaaucac	26,78	8,33	3,21	0,04	
SEQ ID NO: 625	547	hsa-miR-518e*	cucuagagggaagcgcuuucug	2,22	2,67	0,83	0,04	
SEQ ID NO: 66	548	hsa-miR-519c-5p	cucuagagggaagcgcuuucug	1,56	13,72	0,11	0,04	
SEQ ID NO: 373	549	hsa-miR-520d-5p	cuacaaagggaagcccuuuc	37,67	44,89	0,84	0,04	
SEQ ID NO: 631	550	hsa-miR-610	ugagcuaaaugugugcugga	24	36,11	0,66	0,04	
SEQ ID NO: 348	551	hsa-miR-920	ggggagcugugaagccagua	50,56	80,11	0,63	0,04	

SEQ ID NO: 789	552	hsa-miR-22*	aguucuucaguggcaagcuuua	69,67	36,11	1,93	0,03
SEQ ID NO: 861	553	hsa-miR-92a	uauugcacuugucccggccugu	22685,5	18004,17	1,26	0,03
SEQ ID NO: 649	554	hsa-miR-1202	gugccagcugcagugggggag	71,56	86,67	0,83	0,03
SEQ ID NO: 362	555	hsa-miR-513a-5p	uucacagggaggugucau	450,61	348,22	1,29	0,03
SEQ ID NO: 681	556	hsa-miR-1308	gcaugggugguucagugg	15421,86	9312,5	1,66	0,03
SEQ ID NO: 402	557	hsa-miR-1183	cacuguaggugaugugagaguggggca	120,44	82,89	1,45	0,03
SEQ ID NO: 446	558	hsa-miR-1225-5p	guggguacggcccagugggggg	142,83	194	0,74	0,03
SEQ ID NO: 385	559	hsa-miR-1300	uugagaaggaggcugcug	327,33	192,67	1,7	0,03
SEQ ID NO: 816	560	hsa-miR-139-3p	ggagacgcggcccuguuggagu	43,11	33,78	1,28	0,03
SEQ ID NO: 697	561	hsa-miR-25*	aggcggagacuugggcaauug	111,78	68,44	1,63	0,03
SEQ ID NO: 395	562	hsa-miR-26a-2*	ccuauucuugauuacuuguuuc	1	1	1	0,03
SEQ ID NO: 496	563	hsa-miR-330-5p	ucucugggccugugucuuaggc	1	1	1	0,03
SEQ ID NO: 724	564	hsa-miR-338-3p	uccagcaucagugauuuuguug	13,72	1	13,72	0,03
SEQ ID NO: 422	565	hsa-miR-498	uuucaagccagggggcguuuuuc	101,11	58,78	1,72	0,03
SEQ ID NO: 311	566	hsa-miR-500*	augcaccugggcaaggauucug	254,28	8,33	30,51	0,03
SEQ ID NO: 423	567	hsa-miR-518d-5p	cucuagagggaagcacuuucug	36,78	19,78	1,86	0,03
SEQ ID NO: 600	568	hsa-miR-520c-5p	cucuagagggaagcacuuucug	31,56	30,44	1,04	0,03
SEQ ID NO: 434	569	hsa-miR-548m	caaaguauuugugguuuuug	1	1	1	0,03
SEQ ID NO: 312	570	hsa-miR-561*	gaaaucaagcgugggugagacc	97,33	87,67	1,11	0,03
SEQ ID NO: 233	571	hsa-miR-671-5p	aggaagcccuggagggggcuggag	272	168,11	1,62	0,03
SEQ ID NO: 76	572	hsa-miR-720	ucucgcugggccucca	189,89	61,56	3,08	0,03
SEQ ID NO: 737	573	hsa-miR-766	acuccagccccacagccucagc	106,11	70,89	1,5	0,03
SEQ ID NO: 597	574	hsa-miR-877	guagaggagauggcgcaggg	364,22	450,61	0,81	0,03
SEQ ID NO: 480	575	hsa-let-7a*	cuauacaaucuacugucuuuc	4,78	4,22	1,13	0,03
SEQ ID NO: 655	576	hsa-let-7e*	cuauacggccucccuagccuuucc	1	1	1	0,03
SEQ ID NO: 620	577	hsa-let-7i*	cugcgcaagcuacugccuugcu	5,22	1	5,22	0,03
SEQ ID NO: 585	578	hsa-miR-100*	caagcuuguaucuauaggguaug	1	1	1	0,03
SEQ ID NO: 481	579	hsa-miR-101*	caguuaucacagugcugaugcu	1	1	1	0,03
SEQ ID NO: 497	580	hsa-miR-1243	aacuggaucaauuauaaggagug	1	1	1	0,03
SEQ ID NO: 545	581	hsa-miR-127-3p	ucggauccgucugagcuuggcu	1	1	1	0,03
SEQ ID NO: 583	582	hsa-miR-133b	uuugguccccuucaaccagcua	24	19,78	1,21	0,03
SEQ ID NO: 683	583	hsa-miR-135a	uauggcuuuuuauuccuauguga	1	1	1	0,03
SEQ ID NO: 498	584	hsa-miR-136*	caucaucgucucaaaugagucu	1	1	1	0,03
SEQ ID NO: 499	585	hsa-miR-141*	caucuuccaguacaguguugga	1	1	1	0,03
SEQ ID NO: 558	586	hsa-miR-183*	gugaauuaccgaagggccauaa	82,06	72,22	1,14	0,03
SEQ ID NO: 461	587	hsa-miR-190	ugauauguuugauauauuaggu	1	1	1	0,03
SEQ ID NO: 555	588	hsa-miR-200a	uaacacugucugguaacgaugu	1	1	1	0,03

SEQ ID NO: 554	589	hsa-miR-200b*	caucuuacugggcagcauugga	7,44	4,22	1,76	0,03
SEQ ID NO: 682	590	hsa-miR-208a	auaagacgagcaaaaagcuugu	19,89	14,89	1,34	0,03
SEQ ID NO: 528	591	hsa-miR-20a*	acugcauuaugagcacuuaaag	1	1	1	0,03
SEQ ID NO: 483	592	hsa-miR-217	uacugcaucaggaacugauugga	1	1	1	0,03
SEQ ID NO: 462	593	hsa-miR-218-1*	augguuccgucaagcaccaugg	1	1	1	0,03
SEQ ID NO: 506	594	hsa-miR-26a-1*	ccuauucuugguuacuugcacg	1	1	1	0,03
SEQ ID NO: 522	595	hsa-miR-27a*	agggcuuagcugcuugugagca	1	1	1	0,03
SEQ ID NO: 617	596	hsa-miR-329	aacacaccugguuaaccucuuu	1	1,56	0,64	0,03
SEQ ID NO: 684	597	hsa-miR-331-5p	cuagguaugguccagggaucc	22,22	21,11	1,05	0,03
SEQ ID NO: 582	598	hsa-miR-337-5p	gaacggcuucauacaggagu	2,67	8,33	0,32	0,03
SEQ ID NO: 463	599	hsa-miR-367*	acuguugcuaauaugcaacucu	1	1	1	0,03
SEQ ID NO: 566	600	hsa-miR-373	gaagugcuucgauuuuggggugu	1	1,56	0,64	0,03
SEQ ID NO: 532	601	hsa-miR-377*	agaguugccuugguguaaauuc	1	1	1	0,03
SEQ ID NO: 664	602	hsa-miR-381	uauacaagggcaagcucucugu	7,44	1	7,44	0,03
SEQ ID NO: 570	603	hsa-miR-412	acuucaccugguccacuagccgu	4	1,56	2,57	0,03
SEQ ID NO: 539	604	hsa-miR-448	uugcauauguaggaugucccau	1	1	1	0,03
SEQ ID NO: 464	605	hsa-miR-450a	uuuugcgauguguuccuaauau	1	1	1	0,03
SEQ ID NO: 660	606	hsa-miR-452	aacuguuugcagaggaaacuga	2,67	1	2,67	0,03
SEQ ID NO: 614	607	hsa-miR-485-3p	gucauacacggcucuccucucu	1	1,56	0,64	0,03
SEQ ID NO: 541	608	hsa-miR-487a	aaucauacagggacaucccaguu	1,56	1,56	1	0,03
SEQ ID NO: 533	609	hsa-miR-504	agacccuggcucugcacucuauc	1	1	1	0,03
SEQ ID NO: 374	610	hsa-miR-512-5p	cacucagccuugagggcacuuuc	1	4,22	0,24	0,03
SEQ ID NO: 500	611	hsa-miR-517c	aucugcaucccuuuagagugu	1	1	1	0,03
SEQ ID NO: 571	612	hsa-miR-518c	caaagcgcuucccuuuagagugu	1	1	1	0,03
SEQ ID NO: 556	613	hsa-miR-518e	aaagcgcuucccuucagagug	1	1	1	0,03
SEQ ID NO: 515	614	hsa-miR-539	ggagaaauuauccuuggugugu	1	1	1	0,03
SEQ ID NO: 534	615	hsa-miR-548c-3p	caaaaaucucaauuacuuuugc	1	1	1	0,03
SEQ ID NO: 561	616	hsa-miR-548o	ccaaaacugcaguuacuuuugc	1	1	1	0,03
SEQ ID NO: 424	617	hsa-miR-556-3p	auauuaccauuaggcucaucuuu	1	1	1	0,03
SEQ ID NO: 482	618	hsa-miR-559	uaaaguaaaauaugcaccaaaa	1	1	1	0,03
SEQ ID NO: 520	619	hsa-miR-573	cugaagugauguguaacugaucag	1	1	1	0,03
SEQ ID NO: 513	620	hsa-miR-580	uugagaaugaugaaucauuagg	1	1	1	0,03
SEQ ID NO: 452	621	hsa-miR-582-5p	uuacaguuguucaaccaguuacu	1	3,11	0,32	0,03
SEQ ID NO: 572	622	hsa-miR-589*	ucagaacaaaugccgguucccaga	22,67	20,56	1,1	0,03
SEQ ID NO: 523	623	hsa-miR-613	aggaauguucccuuuugcc	1	1	1	0,03
SEQ ID NO: 501	624	hsa-miR-621	ggcuagcaacagcgcuuacu	1	1	1	0,03
SEQ ID NO: 403	625	hsa-miR-626	agcugucugaaaauguccuu	1	1	1	0,03

SEQ ID NO: 540	626	hsa-miR-633	cuaauaguauccuaccacaauaaa	1	1	1	1	0,03
SEQ ID NO: 702	627	hsa-miR-650	aggaggcagcgcucucaggac	14,89	12,44	1,2	1	0,03
SEQ ID NO: 832	628	hsa-miR-661	ugccuggguccucuggccucugccgcgu	4	1	4	4	0,03
SEQ ID NO: 467	629	hsa-miR-767-5p	ugcaccauggguugucugagcaug	1	1	1	1	0,03
SEQ ID NO: 451	630	hsa-miR-770-5p	uccaguaccacgugucagggcca	9,11	11,33	0,8	0,8	0,03
SEQ ID NO: 621	631	hsa-miR-935	ccaguuaccgcuucccgcuaccgc	1	1	1	1	0,03
SEQ ID NO: 783	632	hsa-miR-941	cacccggcugugugcacaugugc	39,67	4,22	9,39	9,39	0,03
SEQ ID NO: 576	633	hsa-miR-944	aaauuauuguacaucggauguag	1	1	1	1	0,03
SEQ ID NO: 396	634	hsa-miR-187	ucgugucuuguguugcagccgg	1	4,44	0,23	0,23	0,03
SEQ ID NO: 767	635	hsa-miR-191*	gcugcgcuugguauucgcuccc	53	47,06	1,13	1,13	0,03
SEQ ID NO: 714	636	hsa-miR-320c	aaaagcuggguugagaggu	5382,15	6141,96	0,88	0,88	0,02
SEQ ID NO: 703	637	hsa-miR-1227	cgugccacccuuuuccccag	32	29,94	1,07	1,07	0,02
SEQ ID NO: 559	638	hsa-miR-148b	ucagugcaucacagaacuuugu	364,22	1	364,22	364,22	0,02
SEQ ID NO: 313	639	hsa-miR-186	caaagaauucuccuuuugggcu	39,67	18,72	2,12	2,12	0,02
SEQ ID NO: 591	640	hsa-miR-190b	ugauauguuugauauuggguu	1	1	1	1	0,02
SEQ ID NO: 665	641	hsa-miR-340	uuauaauaagcaaugagacugauu	79,67	21,56	3,7	3,7	0,02
SEQ ID NO: 618	642	hsa-miR-483-5p	aagacgggaggaaagaaggag	4541,94	3572,67	1,27	1,27	0,02
SEQ ID NO: 425	643	hsa-miR-502-5p	auccuugcuaucugggugcua	6,78	1	6,78	6,78	0,02
SEQ ID NO: 586	644	hsa-miR-589	ugagaaccacgucugcucugag	6,78	1	6,78	6,78	0,02
SEQ ID NO: 715	645	hsa-miR-320b	aaaagcuggguugagagggcaa	6349,31	6349,31	1	1	0,02
SEQ ID NO: 288	646	hsa-miR-1538	cggcccgggcugcugcugucccu	48	18,72	2,56	2,56	0,02
SEQ ID NO: 546	647	hsa-miR-486-5p	uccuguacugagcugccccgag	42197,28	42197,28	1	1	0,02
SEQ ID NO: 791	648	hsa-miR-149*	agggagggacgggggcugugc	18004,17	13307,74	1,35	1,35	0,02
SEQ ID NO: 514	649	hsa-let-7b*	cuauacaaccuacugccuucc	22,22	13,72	1,62	1,62	0,02
SEQ ID NO: 819	650	hsa-miR-1180	uuuccggcucgcgugggugugu	61,11	21,11	2,89	2,89	0,02
SEQ ID NO: 562	651	hsa-miR-1203	cccggagccaggaugcagcuc	43,11	28	1,54	1,54	0,02
SEQ ID NO: 490	652	hsa-miR-1257	agugaaugauggguucugacc	2,67	1,56	1,71	1,71	0,02
SEQ ID NO: 844	653	hsa-miR-1258	aguuaggauuaggucgugga	15,78	12,44	1,27	1,27	0,02
SEQ ID NO: 386	654	hsa-miR-1264	caagucuuauuugagcaccuguu	1	1	1	1	0,02
SEQ ID NO: 850	655	hsa-miR-1470	gcccuccgcccgugcacccg	20,56	12,11	1,7	1,7	0,02
SEQ ID NO: 657	656	hsa-miR-18b*	ugcccuaaaugcccuucuggc	24,56	18,11	1,36	1,36	0,02
SEQ ID NO: 502	657	hsa-miR-1915*	accuugccuugcugccgggcc	1	11,33	0,09	0,09	0,02
SEQ ID NO: 680	658	hsa-miR-19b-2*	aguuuugcagguuugcauuuca	1	1	1	1	0,02
SEQ ID NO: 797	659	hsa-miR-203	gugaaauguuuaggaccacuag	1	1	1	1	0,02
SEQ ID NO: 439	660	hsa-miR-206	uggaauguaaggaagugugugg	15,78	28,44	0,55	0,55	0,02
SEQ ID NO: 317	661	hsa-miR-211	uucccuuugucauccuucgccu	1	3,67	0,27	0,27	0,02
SEQ ID NO: 435	662	hsa-miR-219-2-3p	agaauugugggcuggacaucugu	4	1	4	4	0,02

SEQ ID NO: 524	663	hsa-miR-220c	acacagggcuguugugaagacu	1	3,11	0,32	0,02	
SEQ ID NO: 447	664	hsa-miR-223*	cguguauuugacaagcugagu	1	4,44	0,23	0,02	
SEQ ID NO: 588	665	hsa-miR-224	caagucacuagugguuccguu	1	1	1	0,02	
SEQ ID NO: 809	666	hsa-miR-27b	uucacaguggcuaaguucugc	73,33	33,78	2,17	0,02	
SEQ ID NO: 492	667	hsa-miR-296-5p	agggcccccccucaauccugu	48	58,89	0,82	0,02	
SEQ ID NO: 792	668	hsa-miR-30c-1*	cugggagaggguuguuuacucc	101,11	101,11	1	0,02	
SEQ ID NO: 426	669	hsa-miR-31	aggcaagaugcuggcauagcu	8,44	3,67	2,3	0,02	
SEQ ID NO: 647	670	hsa-miR-382	gaaguuguucguggugguucg	9,56	1,56	6,14	0,02	
SEQ ID NO: 648	671	hsa-miR-454*	acccuaucaauauugucucugc	27	21,11	1,28	0,02	
SEQ ID NO: 675	672	hsa-miR-486-3p	cggggcagcucaguacaggau	37,89	18,72	2,02	0,02	
SEQ ID NO: 363	673	hsa-miR-509-3-5p	uacugcagacguggcaaucaug	1	1	1	0,02	
SEQ ID NO: 771	674	hsa-miR-518f*	cucuagagggaagcacuuucuc	25,17	58,89	0,43	0,02	
SEQ ID NO: 484	675	hsa-miR-519b-5p	cucuagagggaagcgcuuucug	1,56	4,44	0,35	0,02	
SEQ ID NO: 407	676	hsa-miR-519e	aagugccuccuuuuagaguguu	1	1	1	0,02	
SEQ ID NO: 440	677	hsa-miR-520d-3p	aaagugcuucuccuuuagagugu	1	1	1	0,02	
SEQ ID NO: 270	678	hsa-miR-523*	cucuagagggaagcgcuuucug	6,78	18,72	0,36	0,02	
SEQ ID NO: 525	679	hsa-miR-524-3p	gaaggcgcuucccuuuagagu	1	1	1	0,02	
SEQ ID NO: 503	680	hsa-miR-541	ugugggcacagaaaucuggacu	16,78	28,44	0,59	0,02	
SEQ ID NO: 504	681	hsa-miR-543	aaacauucgcggugcacuucuu	1	1	1	0,02	
SEQ ID NO: 712	682	hsa-miR-548c-5p	aaaaguaauugcgguuuuugcc	1	1	1	0,02	
SEQ ID NO: 606	683	hsa-miR-548e	aaaaacugagacuacuuuugca	1	1	1	0,02	
SEQ ID NO: 441	684	hsa-miR-548i	aaaaguaauugcggauuuugcc	1	1	1	0,02	
SEQ ID NO: 549	685	hsa-miR-548l	aaaaguaauugcggguuuuguc	1	1	1	0,02	
SEQ ID NO: 593	686	hsa-miR-548p	uagcaaaaacugcaguuacuuu	1	1	1	0,02	
SEQ ID NO: 349	687	hsa-miR-571	ugaguugccaucugagugag	1	1	1	0,02	
SEQ ID NO: 676	688	hsa-miR-596	aagccugccccggcuccucggg	1	3,11	0,32	0,02	
SEQ ID NO: 774	689	hsa-miR-598	uacgucaucguugucaucguca	12,22	1	12,22	0,02	
SEQ ID NO: 738	690	hsa-miR-600	acuuacagacaagagccuugcuc	1	1	1	0,02	
SEQ ID NO: 184	691	hsa-miR-623	aucccuugcaggggccugauuggguu	1	1	1	0,02	
SEQ ID NO: 658	692	hsa-miR-630	aguauucuguaccagggaaggu	4	6,56	0,61	0,02	
SEQ ID NO: 758	693	hsa-miR-642	gucccucuccaaaugugucuug	1	1	1	0,02	
SEQ ID NO: 573	694	hsa-miR-643	acuuguaugcuagucucagguag	1	1	1	0,02	
SEQ ID NO: 219	695	hsa-miR-654-3p	uaugucugcugaccaucaccuu	1	1	1	0,02	
SEQ ID NO: 364	696	hsa-miR-873	gcaggaacuugugagcuucccu	1	5,11	0,2	0,02	
SEQ ID NO: 700	697	hsa-miR-890	uacuuggaaaggcaucaguug	20,56	11,56	1,78	0,02	
SEQ ID NO: 863	698	hsa-miR-150	ucucccaacccuuguaccagug	600,34	839,63	0,72	0,02	
SEQ ID NO: 757	699	hsa-miR-125b	ucccugagacccuaacuuguga	65,56	38,33	1,71	0,01	

SEQ ID NO: 628	700	hsa-miR-196a*	cggcaacaagaaaacugccugag	15,33	18,72	0,82	0,01
SEQ ID NO: 397	701	hsa-miR-199a-3p	acaguagucugcacauugguua	1	19,78	0,05	0,01
SEQ ID NO: 730	702	hsa-miR-421	aucaacagacauuaauugggcgc	217,67	1	217,67	0,01
SEQ ID NO: 643	703	hsa-miR-483-3p	ucacuccuccuccuccgucuu	13	30,44	0,43	0,01
SEQ ID NO: 779	704	hsa-miR-515-5p	uucuccaaaagaaagcacuuucug	1	1	1	0,01
SEQ ID NO: 615	705	hsa-miR-541*	aaaggauucugcugucgugaucccaccu	1	1	1	0,01
SEQ ID NO: 535	706	hsa-miR-1276	uaaagagcccuguggagaca	24,56	30,44	0,81	0,01
SEQ ID NO: 749	707	hsa-miR-191	caacggaaucccaaaagcagcug	31577,57	27467,24	1,15	0,01
SEQ ID NO: 798	708	hsa-miR-302c*	uuuaacauggggguaccugcug	68,67	18,72	3,67	0,01
SEQ ID NO: 745	709	hsa-miR-30b*	cugggagguggauguuuacuuc	88,56	98,56	0,9	0,01
SEQ ID NO: 768	710	hsa-miR-221	agcuacauugucugcuggguuuc	382	539,56	0,71	0,01
SEQ ID NO: 694	711	hsa-miR-1915	ccccagggcgacggcgggg	2223,89	3080,08	0,72	0,01
SEQ ID NO: 818	712	hsa-miR-1228	ucacaccugccucgccccc	39,67	140,78	0,28	0,01
SEQ ID NO: 656	713	hsa-miR-1237	uccuucugcucccguccccag	37,89	30,44	1,24	0,01
SEQ ID NO: 104	714	hsa-miR-129-5p	cuuuuugcggucuggggcuugc	33,78	14,89	2,27	0,01
SEQ ID NO: 732	715	hsa-miR-150*	cugguacaggccugggggacag	101,11	101,78	0,99	0,01
SEQ ID NO: 722	716	hsa-miR-1909*	ugagugccggugccugcccug	20,56	16,33	1,26	0,01
SEQ ID NO: 728	717	hsa-miR-1910	ccaguccugugccugccgccu	7,44	11,56	0,64	0,01
SEQ ID NO: 650	718	hsa-miR-202	agagguauagggcaugggaa	111,78	61,11	1,83	0,01
SEQ ID NO: 587	719	hsa-miR-218	uugugcuugaucuaaccaugu	1	1	1	0,01
SEQ ID NO: 759	720	hsa-miR-30a*	cuuucagucggauguuugcagc	1	1	1	0,01
SEQ ID NO: 717	721	hsa-miR-326	ccucugggcccuucccuccag	20,56	19,78	1,04	0,01
SEQ ID NO: 567	722	hsa-miR-371-5p	acucaaacugugggggcacu	98	93,22	1,05	0,01
SEQ ID NO: 603	723	hsa-miR-505	cgucaacacuugcugguuuccu	53	11,33	4,68	0,01
SEQ ID NO: 820	724	hsa-miR-575	gagccaguuggacaggagc	58,78	70,67	0,83	0,01
SEQ ID NO: 491	725	hsa-miR-7	uggaagacuagugauuuuguugu	256,44	1	256,44	0,01
SEQ ID NO: 828	726	hsa-miR-938	ugcccuuaaaggugaacccagu	2,22	1	2,22	0,01
SEQ ID NO: 740	727	hsa-miR-340*	uccgucucaguuacuuuauagcc	4	1	4	0,01
SEQ ID NO: 427	728	hsa-miR-100	aacccguagauccgaacuugug	212	98,56	2,15	0,01
SEQ ID NO: 733	729	hsa-miR-1229	cucucaccacugcccucccacag	27,89	33,78	0,83	0,01
SEQ ID NO: 772	730	hsa-miR-1233	ugagcccugucuccucccgcag	8,44	12,44	0,68	0,01
SEQ ID NO: 810	731	hsa-miR-1236	ccucuucccuugucucuccag	39,67	44	0,9	0,01
SEQ ID NO: 623	732	hsa-miR-1274a	gucccuguucaggcgcca	93,89	12	7,82	0,01
SEQ ID NO: 633	733	hsa-miR-1282	ucguuugccuuuuucugcuu	29,44	1,56	18,93	0,01
SEQ ID NO: 754	734	hsa-miR-129-3p	aagcccuuaccccaaaaagcau	4	28,33	0,14	0,01
SEQ ID NO: 853	735	hsa-miR-129*	aagcccuuacccaaaaaguau	8,44	1	8,44	0,01
SEQ ID NO: 766	736	hsa-miR-1296	uuagggcccuggcuccauccuc	14,56	4,22	3,45	0,01

SEQ ID NO: 781	737	hsa-miR-634	aaccagcaccccaacuuuggac	36,78	49,22	0,75	0,01
SEQ ID NO: 762	738	hsa-miR-769-3p	cugggaucucccggggucuugguu	25,56	15,56	1,64	0,01
SEQ ID NO: 735	739	hsa-miR-320d	aaaagcuggguugagagga	4318,58	4390,58	0,98	0,01
SEQ ID NO: 521	740	hsa-miR-93	caaagugcuguucgugcagguag	4779,31	5660,31	0,84	0,01
SEQ ID NO: 642	741	hsa-let-7g*	cuguacaggccacugccuugc	1	1	1	0,01
SEQ ID NO: 672	742	hsa-miR-1267	ccuguugaaguguaaucccca	9,56	1,56	6,14	0,01
SEQ ID NO: 817	743	hsa-miR-130b*	acucuuucccuguugcacuac	2,67	1	2,67	0,01
SEQ ID NO: 666	744	hsa-miR-132	uaacagucuacagccauggucg	24,56	4,22	5,82	0,01
SEQ ID NO: 747	745	hsa-miR-138-1*	gcuacuucacaacaccagggcc	19,89	4,22	4,71	0,01
SEQ ID NO: 667	746	hsa-miR-142-3p	uguaguguuuccuacuuuaugga	1	1	1	0,01
SEQ ID NO: 785	747	hsa-miR-195*	ccaauauuggcugugcugcucc	1	1	1	0,01
SEQ ID NO: 436	748	hsa-miR-501-3p	aaugcacccgggcaaggauucu	286,11	21,56	13,27	0,01
SEQ ID NO: 563	749	hsa-miR-135a*	uauagggauuggagccguggcg	644,9	480,44	1,34	0,01
SEQ ID NO: 536	750	hsa-miR-138	agcuggugugugaaucaggccg	8,44	1	8,44	0,01
SEQ ID NO: 644	751	hsa-miR-214	acagcaggcacagacaggcagu	29,11	3,11	9,36	0,01
SEQ ID NO: 428	752	hsa-miR-296-3p	gaggguuggguggaggcucucc	606,46	408,44	1,48	0,01
SEQ ID NO: 829	753	hsa-miR-608	agggcuggcuguuggacagcuccgu	106,89	96,94	1,1	0,01
SEQ ID NO: 634	754	hsa-miR-10b*	acagauucgauucuagggaau	1	1	1	0,01
SEQ ID NO: 209	755	hsa-miR-1184	ccugcagcgacuugauggcuucc	1	1	1	0,01
SEQ ID NO: 796	756	hsa-miR-1231	gugucugggcggacagcugc	43,11	30,44	1,42	0,01
SEQ ID NO: 581	757	hsa-miR-1281	ucgccucccucccucccc	8,44	35,83	0,24	0,01
SEQ ID NO: 773	758	hsa-miR-1290	uggauuuuuggaucaggga	39,67	28,33	1,4	0,01
SEQ ID NO: 710	759	hsa-miR-1321	cagggagguguaauguuau	74,22	58,78	1,26	0,01
SEQ ID NO: 821	760	hsa-miR-134	ugugacugguugaccagagggg	55,67	34	1,64	0,01
SEQ ID NO: 601	761	hsa-miR-148a*	aaaguucugagacacuccgacu	1	1	1	0,01
SEQ ID NO: 807	762	hsa-miR-152	ucagugcaugacagaacuugg	16,78	12,11	1,39	0,01
SEQ ID NO: 718	763	hsa-miR-1825	uccagugcccuccucucc	21,11	30,44	0,69	0,01
SEQ ID NO: 608	764	hsa-miR-1914	cccugugcccgcccacuucug	6,78	14,89	0,46	0,01
SEQ ID NO: 408	765	hsa-miR-204	uucccuuugucauccuaugccu	1	1	1	0,01
SEQ ID NO: 661	766	hsa-miR-26b*	ccuguucuccauuacuuggcuc	1	4,22	0,24	0,01
SEQ ID NO: 669	767	hsa-miR-30c-2*	cugggagaaggcuguuuacucu	68,67	56,78	1,21	0,01
SEQ ID NO: 645	768	hsa-miR-34b*	uaggcagugucauuagcugauug	1	1	1	0,01
SEQ ID NO: 592	769	hsa-miR-375	uuugcuccguucggcucgcguga	1	1	1	0,01
SEQ ID NO: 564	770	hsa-miR-383	agaucagaaggugauugugguucu	15,33	18,67	0,82	0,01
SEQ ID NO: 837	771	hsa-miR-409-3p	gaauguugcucgguguucgaccccu	97,33	68,44	1,42	0,01
SEQ ID NO: 835	772	hsa-miR-450b-5p	uuuugcaauauguuccugaaua	1	1	1	0,01
SEQ ID NO: 707	773	hsa-miR-455-3p	gcaguccaugggcauauacac	1	1	1	0,01

SEQ ID NO: 640	774	hsa-miR-490-3p	caaccuggaggacuccaugcug	1	1	1	0,01	
SEQ ID NO: 811	775	hsa-miR-495	aaacaaacauggugcacuucuu	2,67	3,67	0,73	0,01	
SEQ ID NO: 748	776	hsa-miR-501-5p	aauccuuugucccugggugaga	4,78	3,11	1,54	0,01	
SEQ ID NO: 662	777	hsa-miR-516b	aucuggaaggcuaaagaagcacuuu	52	56,22	0,92	0,01	
SEQ ID NO: 742	778	hsa-miR-520a-5p	cuccagagggaagcacuuucu	15,33	18,72	0,82	0,01	
SEQ ID NO: 652	779	hsa-miR-593	ugucucugcuggggcuuucu	30,44	46,44	0,66	0,01	
SEQ ID NO: 854	780	hsa-miR-625	agggggaaagcuucuaaagucc	182,44	109,67	1,66	0,01	
SEQ ID NO: 814	781	hsa-miR-675	uggugcggagagggcccacagug	185,22	172,44	1,07	0,01	
SEQ ID NO: 653	782	hsa-miR-760	cggcucugggucuguggga	34,89	53,33	0,65	0,01	
SEQ ID NO: 775	783	hsa-miR-769-5p	ugagaccucuggguucugagcu	15,33	3,67	4,18	0,01	
SEQ ID NO: 822	784	hsa-miR-875-3p	ccuggaaacacugagguuugug	6,78	1	6,78	0,01	
SEQ ID NO: 769	785	hsa-miR-92a-1*	agguugggaucgguugcaaugcu	20,56	21,56	0,95	0,01	
SEQ ID NO: 750	786	hsa-miR-107	agcagcauuguacagggcuauca	4106,11	4915,83	0,84	0	
SEQ ID NO: 624	787	hsa-miR-1226	ucaccagccccugugcuccccuag	1	4,44	0,23	0	
SEQ ID NO: 580	788	hsa-miR-1260	aucccaccucugccacca	84,17	51,33	1,64	0	
SEQ ID NO: 815	789	hsa-miR-1274b	uccccuguucgggcgcca	176,56	63,61	2,78	0	
SEQ ID NO: 760	790	hsa-miR-139-5p	ucuacagugcacgugucuccag	1,56	4,22	0,37	0	
SEQ ID NO: 793	791	hsa-miR-200c*	cgucuuacccagcaguguuugg	1	1	1	0	
SEQ ID NO: 646	792	hsa-miR-302d*	acuuuaacaugggaggcacuugc	1	11,33	0,09	0	
SEQ ID NO: 537	793	hsa-miR-431	ugucuugcaggccgucaugca	1	3,67	0,27	0	
SEQ ID NO: 638	794	hsa-miR-499-5p	uuaagacuugcagugaugauuu	1	1	1	0	
SEQ ID NO: 802	795	hsa-miR-526b*	gaaaguguccuccuuuagaggc	1	1	1	0	
SEQ ID NO: 776	796	hsa-miR-614	gaacgccuguucuugccaggugg	9,11	4,22	2,16	0	
SEQ ID NO: 551	797	hsa-miR-889	uuaauaucggacaaccauugu	1	1	1	0	
SEQ ID NO: 709	798	hsa-miR-96	uuuggcacuagcacauuuuugcu	106,89	36,11	2,96	0	
SEQ ID NO: 842	799	hsa-miR-193b*	cgggguuuugagggcgagauga	81,11	108,56	0,75	0	
SEQ ID NO: 695	800	hsa-miR-518c*	ucucuggagggaagcacuuucug	109,67	63,61	1,72	0	
SEQ ID NO: 855	801	hsa-miR-519a*	cucuagagggaagcgcuuucug	1	4,44	0,23	0	
SEQ ID NO: 470	802	hsa-miR-526a	cucuagagggaagcacuuucug	27	56,22	0,48	0	
SEQ ID NO: 704	803	hsa-miR-595	gaaguguccguggugugucu	12	11,33	1,06	0	
SEQ ID NO: 799	804	hsa-miR-99a	aacccguagauccgaucuugug	92,56	22,22	4,17	0	
SEQ ID NO: 584	805	hsa-miR-92a-2*	gggugggauuuguugcauuac	148,44	67,44	2,2	0	
SEQ ID NO: 804	806	hsa-miR-181a	aacauucaacgcugucggugagu	586,78	133,11	4,41	0	
SEQ ID NO: 800	807	hsa-miR-146a	ugagaacugaauuccauggguu	136,17	129,44	1,05	0	
SEQ ID NO: 851	808	hsa-miR-105*	acggauguuugagcaugugcua	2,67	1	2,67	0	
SEQ ID NO: 830	809	hsa-miR-1279	ucauauugcucuucuucu	1	1	1	0	
SEQ ID NO: 845	810	hsa-miR-154	uagguuauccguguugccuucg	1	1	1	0	

SEQ ID NO: 784	811	hsa-miR-376c	aacauagaggaaauuccacgu	1	1	1	0	
SEQ ID NO: 404	812	hsa-miR-513b	uucacaaggaggugucauuuau	91,17	72,22	1,26	0	
SEQ ID NO: 574	813	hsa-miR-592	uugugucaauaugcgaugaugu	1	1	1	0	
SEQ ID NO: 705	814	hsa-miR-1255b	cggaugagcaaagaaagugggu	87,67	76,56	1,15	0	
SEQ ID NO: 825	815	hsa-miR-526b	cucuugagggaagcacuuucugu	67,78	33,78	2,01	0	
SEQ ID NO: 847	816	hsa-miR-588	uuggccacaaugggauagaac	1,56	1,56	1	0	
SEQ ID NO: 743	817	hsa-miR-1179	aagcauucuuucauuggguugg	1	1	1	0	
SEQ ID NO: 833	818	hsa-miR-1208	ucacuguucagacaggcgga	27	18,72	1,44	0	
SEQ ID NO: 626	819	hsa-miR-1225-3p	ugagccccugugccgccccag	39,67	42,78	0,93	0	
SEQ ID NO: 729	820	hsa-miR-1226*	gugagggcaugcaggccugugauguggg	99,11	96,94	1,02	0	
SEQ ID NO: 790	821	hsa-miR-1234	ucggccugaccacccacccac	53,67	82,06	0,65	0	
SEQ ID NO: 831	822	hsa-miR-1249	acgcccucccccccccuucuca	24,56	30,22	0,81	0	
SEQ ID NO: 812	823	hsa-miR-143	ugagaugaagcacuguagcuc	20,56	12	1,71	0	
SEQ ID NO: 856	824	hsa-miR-181a-2*	accacugaccguugacuguacc	115,33	67,44	1,71	0	
SEQ ID NO: 508	825	hsa-miR-184	uggacggagaacugauaaggguu	94,56	56,78	1,67	0	
SEQ ID NO: 765	826	hsa-miR-196a	uagguaguuucauguuguugg	4	1	4	0	
SEQ ID NO: 857	827	hsa-miR-199b-5p	cccaguguuuagacuaccuguuc	4	1	4	0	
SEQ ID NO: 635	828	hsa-miR-216a	uaaucucagcuggcaacuguga	1	1	1	0	
SEQ ID NO: 858	829	hsa-miR-27a	uucacaguggcuaaguuccgc	150,56	55,22	2,73	0	
SEQ ID NO: 708	830	hsa-miR-345	gcugacuccuaguccagggcuc	168,11	34,44	4,88	0	
SEQ ID NO: 813	831	hsa-miR-362-3p	aacacaccuauucaaggauuca	16,44	14,89	1,1	0	
SEQ ID NO: 673	832	hsa-miR-507	uuuugcaccuuuuggagugaa	1	1	1	0	
SEQ ID NO: 841	833	hsa-miR-517*	ccucuagauggaagcacugucu	16,78	12,11	1,39	0	
SEQ ID NO: 859	834	hsa-miR-518a-3p	gaaagcgcuucccuugcugga	1	1	1	0	
SEQ ID NO: 777	835	hsa-miR-578	cuucuugugcucuaggauugu	1	1	1	0	
SEQ ID NO: 726	836	hsa-miR-601	uggucuaggauuguuggaggag	20,56	21,89	0,94	0	
SEQ ID NO: 429	837	hsa-miR-615-5p	ggggucccccgggugcucggauc	34	12,11	2,81	0	
SEQ ID NO: 805	838	hsa-miR-622	acagucugcugagguuggagc	6,78	3,11	2,18	0	
SEQ ID NO: 751	839	hsa-miR-639	aucgcugcggguugcgagcgcugu	1	1	1	0	
SEQ ID NO: 721	840	hsa-miR-886-3p	cgcgggugcuuacugacccuu	12,33	1	12,33	0	
SEQ ID NO: 654	841	hsa-miR-940	aaggcagggccccgcucccc	112,44	67,44	1,67	0	
SEQ ID NO: 736	842	hsa-miR-10b	uacccuguagaaccgaauuugug	22,22	8,33	2,67	0	
SEQ ID NO: 744	843	hsa-miR-1178	uugcucacuguucuucccuag	1	1	1	0	
SEQ ID NO: 794	844	hsa-miR-1181	ccgucgccgccacccgagccg	21,11	28	0,75	0	
SEQ ID NO: 706	845	hsa-miR-1252	agaaggaaauugaauucauuua	1	1	1	0	
SEQ ID NO: 727	846	hsa-miR-1298	uucauucggcugucccagaugua	1	1	1	0	
SEQ ID NO: 803	847	hsa-miR-148b*	aaguucuguuauacacucaggc	1	1	1	0	

SEQ ID NO: 746	848	hsa-miR-155*	cuccuacauauuagcauuaaca	1	1	1	0	
SEQ ID NO: 679	849	hsa-miR-24-1*	ugccuacugagcugauaucagu	1	1	1	0	
SEQ ID NO: 862	850	hsa-miR-29b-1*	gcuggauucauaugguguuuaga	1	1	1	0	
SEQ ID NO: 604	851	hsa-miR-496	ugaguauuacaugccaaucuc	15,33	4,44	3,45	0	
SEQ ID NO: 752	852	hsa-miR-518d-3p	caaagcgcuucccuuuggagc	1	1	1	0	
SEQ ID NO: 651	853	hsa-miR-544	auucugcauuuuuagcaaguuc	1	1	1	0	
SEQ ID NO: 741	854	hsa-miR-616*	acucaaaacccuucagugacuu	1	1,56	0,64	0	
SEQ ID NO: 686	855	hsa-miR-640	augauccaggaaccugccucu	4	4,44	0,9	0	
SEQ ID NO: 801	856	hsa-miR-656	aauauuauacagucaaccucu	1	1	1	0	
SEQ ID NO: 764	857	hsa-miR-7-1*	caacaaaucacagucugccaua	15,78	29,33	0,56	0	
SEQ ID NO: 575	858	hsa-miR-892a	cacuguguccuuucugcguag	7,89	14,89	0,53	0	
SEQ ID NO: 612	859	hsa-miR-95	uucaacggguauuuauugagca	1	1	1	0	
SEQ ID NO: 827	860	hsa-miR-1250	acggugcuggauguggccuuu	37,67	40,78	0,92	0	
SEQ ID NO: 860	861	hsa-miR-1265	caggauguggucaaguguugu	6,78	1,56	4,36	0	
SEQ ID NO: 755	862	hsa-miR-1306	acguuggcucugguggug	6,78	4,22	1,61	0	
SEQ ID NO: 674	863	hsa-miR-188-5p	caucccuugcaugguggaggg	21,44	22,22	0,97	0	
SEQ ID NO: 659	864	hsa-miR-519e*	uucuccaaaagggagcacuuuc	17,11	19,78	0,87	0	
SEQ ID NO: 670	865	hsa-miR-627	gugagucucuaagaaaagagga	1	1	1	0	

Figure 10B

SEQ ID NO:	SEQ ID NO:	microRNA	Sequence	Median Cancer	Median Normal	FoldQuotient	t-test significance
SEQ ID NO: 1	1	hsa-miR-126	ucguaccgugagcgaauaaaugcg	606,46	3428,42	0,18	3,43E-05
SEQ ID NO: 2	2	hsa-miR-423-5p	ugaggggcagagagcgagacuuu	6795,89	3976,97	1,71	0,001
SEQ ID NO: 3	3	hsa-let-7i	ugagguaguaguuugugcuguu	4106,11	6349,31	0,65	0,003
SEQ ID NO: 4	4	hsa-let-7d	agagguaguagguugcauaguu	6795,89	13307,74	0,51	0,003
SEQ ID NO: 5	5	hsa-miR-22	aagcugccaguugaagaacugu	7978,5	3868,5	2,06	0,009
SEQ ID NO: 6	6	hsa-miR-15a	uagcagcacauaaugguuugug	3428,42	5944,79	0,58	0,009
SEQ ID NO: 7	7	hsa-miR-98	ugagguaguaaguuguauuguu	322,44	1440,75	0,22	0,009
SEQ ID NO: 8	8	hsa-miR-19a	ugugcaaaucuaugcaaaacuga	420,06	1	420,06	0,015
SEQ ID NO: 9	9	hsa-miR-574-5p	ugagugugugugugugagugugu	108,56	30,22	3,59	0,015
SEQ ID NO: 10	10	hsa-miR-324-3p	acugccccaggugcugcugg	1221,94	700,5	1,74	0,015
SEQ ID NO: 11	11	hsa-miR-20b	caaagugcucauagugcagguag	1118,35	2947,83	0,38	0,015
SEQ ID NO: 12	12	hsa-miR-25	cauugcacuugucucggucuga	12517,64	7639,53	1,64	0,018
SEQ ID NO: 13	13	hsa-miR-195	uagcagcacagaaauauuggc	2575,72	4462,58	0,58	0,018
SEQ ID NO: 14	14	hsa-let-7e	ugagguaggagguuguauaguu	1297,51	2947,83	0,44	0,020
SEQ ID NO: 15	15	hsa-let-7c	ugagguaguagguuguauaguu	5660,31	8969,72	0,63	0,020
SEQ ID NO: 16	16	hsa-let-7f	ugagguaguagauuguauaguu	5382,15	9746,17	0,55	0,020
SEQ ID NO: 17	17	hsa-let-7a	ugagguaguagguuguauaguu	6795,89	12517,64	0,54	0,023
SEQ ID NO: 18	18	hsa-let-7g	ugagguaguaguuuguacaguu	3428,42	6795,89	0,5	0,024
SEQ ID NO: 19	19	hsa-miR-140-3p	uaccacaggguagaaccacgg	9312,5	4621,29	2,02	0,025
SEQ ID NO: 20	20	hsa-miR-339-5p	ucccuguccuccaggagcucacg	312,11	12,44	25,08	0,026
SEQ ID NO: 21	21	hsa-miR-361-5p	uuaucagaaucuccagggguac	606,46	53	11,44	0,031
SEQ ID NO: 22	22	hsa-miR-1283	ucuacaaaggaaagcgcuuucu	2,33	22,22	0,11	0,037
SEQ ID NO: 23	23	hsa-miR-18a*	acugcccuaagugcuccuucugg	1040,44	119,89	8,68	0,044
SEQ ID NO: 24	24	hsa-miR-26b	uucaaguaauucaggauaggu	1085,22	2058,85	0,53	0,044
SEQ ID NO: 25	25	hsa-miR-604	aggcugcggaauucaggac	245	90,78	2,7	0,048
SEQ ID NO: 26	26	hsa-miR-423-3p	agcucggucugaggccccucagu	1797,04	463,22	3,88	0,049
SEQ ID NO: 27	27	hsa-miR-93*	acugcugagcuagcacuucccg	480,44	30,44	15,78	0,049
SEQ ID NO: 28	28	hsa-miR-29a	uagcaccaucugaaaucgguua	447	108,56	4,12	0,068
SEQ ID NO: 29	29	hsa-miR-1248	accucucuguauaaagcacugugcuaaa	154,22	31,33	4,92	0,076
SEQ ID NO: 30	30	hsa-miR-210	cugugcgugugacagcggcuga	412,67	58,89	7,01	0,076
SEQ ID NO: 31	31	hsa-miR-19b	ugugcaaauccaugcaaaacuga	3428,42	1853,1	1,85	0,076
SEQ ID NO: 32	32	hsa-miR-453	agguuguccguggugaguucgca	6,78	57	0,12	0,091
SEQ ID NO: 33	33	hsa-miR-126*	cauuauuacuuuugguacgcg	1	33,78	0,03	0,093

SEQ ID NO: 34	34	hsa-miR-188-3p	cucccacaugcaggguuugca	1	4,44	0,23		0,093
SEQ ID NO: 35	35	hsa-miR-624*	uaguaccaguaccuuguguuca	1	27,78	0,04		0,093
SEQ ID NO: 36	36	hsa-miR-505*	gggagccaggaagguauugaugu	280,11	90,78	3,09		0,099
SEQ ID NO: 37	37	hsa-miR-425	aaugacacgaucacucccguuga	11838,82	7392,17	1,6		0,099
SEQ ID NO: 38	38	hsa-miR-339-3p	ugagcgccucgacgacagagccg	209,67	109,67	1,91		0,099
SEQ ID NO: 39	39	hsa-miR-668	ugucacucggccucggcccacuac	276,44	92,56	2,99		0,099
SEQ ID NO: 40	40	hsa-miR-363*	cgggguggaucacgaugcaauuu	2425,74	723,61	3,35		0,099
SEQ ID NO: 41	41	hsa-miR-15b*	cgaaucauuauuugcugucuca	46,89	1	46,89		0,101
SEQ ID NO: 42	42	hsa-miR-29c*	ugaccgauuucuccugguguuc	61,11	1	61,11		0,105
SEQ ID NO: 43	43	hsa-miR-550*	ugucuuacucccucaggcacau	331,06	5,11	64,77		0,111
SEQ ID NO: 44	44	hsa-miR-34c-3p	aaucacuaacccacacggccagg	4	28,44	0,14		0,133
SEQ ID NO: 45	45	hsa-miR-20a	uaaagugcuuauagugcagguag	2319,9	4202,14	0,55		0,133
SEQ ID NO: 46	46	hsa-miR-374a	uuauaauacaaccugauaagug	225,11	692,94	0,32		0,136
SEQ ID NO: 47	47	hsa-miR-145*	ggauuccuggaaauacuguucu	1	1	1		0,138
SEQ ID NO: 48	48	hsa-miR-302b	uaagugcuuccauguuuuaguag	1	1	1		0,142
SEQ ID NO: 49	49	hsa-miR-106a	aaaagugcuuacagugcagguag	4462,58	6349,31	0,7		0,153
SEQ ID NO: 50	50	hsa-miR-30e	uguaaacauccuugacuggaag	369,89	129,44	2,86		0,165
SEQ ID NO: 51	51	hsa-miR-223	ugucaguuugucaaauacccca	3080,08	5660,31	0,54		0,170
SEQ ID NO: 52	52	hsa-miR-1269	cuggacugagccgugcuacugg	4	34,44	0,12		0,170
SEQ ID NO: 53	53	hsa-let-7b	ugagguaguagguugugugguu	6349,31	9746,17	0,65		0,171
SEQ ID NO: 54	54	hsa-miR-542-3p	ugugacagauugauaacugaaa	1	18,72	0,05		0,171
SEQ ID NO: 55	55	hsa-miR-516b*	ugcuuccuuucagagggu	9,56	31,33	0,3		0,171
SEQ ID NO: 56	56	hsa-miR-451	aaaccguuaccauuacugaguu	1118,35	4106,11	0,27		0,172
SEQ ID NO: 57	57	hsa-miR-519c-3p	aaagugcaucuuuuuagaggau	1	12	0,08		0,172
SEQ ID NO: 58	58	hsa-miR-1244	aaguaguuggauuguuguaugagaugguu	25,56	1	25,56		0,172
SEQ ID NO: 59	59	hsa-miR-602	gacacgggcgacagcugcggccc	20,56	44	0,47		0,189
SEQ ID NO: 60	60	hsa-miR-361-3p	uccccagguguugauucugauuu	367,06	256,44	1,43		0,190
SEQ ID NO: 61	61	hsa-miR-19a*	aguuuugcauaguugcacuaca	1	1	1		0,191
SEQ ID NO: 62	62	hsa-miR-433	aucaugaugggcuccucggugu	1	1	1		0,191
SEQ ID NO: 63	63	hsa-miR-1200	cuccugagccauucugagccuc	1	5,11	0,2		0,202
SEQ ID NO: 64	64	hsa-miR-522	aaaaugguucccuuuagagugu	1	8,33	0,12		0,202
SEQ ID NO: 65	65	hsa-miR-520f	aagugcuucuuuuagaggguu	1	4,22	0,24		0,202
SEQ ID NO: 66	66	hsa-miR-519c-5p	cucuagagggaagcgcuuucug	1,56	13,72	0,11		0,202
SEQ ID NO: 67	67	hsa-miR-192	cugaccuaugaauugacagcc	3080,08	1675,67	1,84		0,207
SEQ ID NO: 68	68	hsa-miR-1245	aagugaucuaaaggccuacau	1	1	1		0,207
SEQ ID NO: 69	69	hsa-miR-151-5p	ucgaggagcucacagucuagu	1732,86	1024,56	1,69		0,210
SEQ ID NO: 70	70	hsa-miR-1288	uggacugcccugaucuggaga	1	1	1		0,212

SEQ ID NO: 71	71	hsa-miR-503	uagcagcgggaacaguucugcag	68,67	73,33	0,94	0,212
SEQ ID NO: 72	72	hsa-miR-563	agguugacauacguuuccc	1	1	1	0,212
SEQ ID NO: 73	73	hsa-miR-663b	ggugggccgccgcgugccugagg	5,56	4,44	1,25	0,212
SEQ ID NO: 74	74	hsa-let-7d*	cuauacgaccugcugccuuuucu	39,44	6	6,57	0,212
SEQ ID NO: 75	75	hsa-miR-199a-5p	cccaguguucagacuaccuguuc	145,33	36,11	4,02	0,212
SEQ ID NO: 76	76	hsa-miR-720	ucucgcuggggccucca	189,89	61,56	3,08	0,212
SEQ ID NO: 77	77	hsa-miR-1246	aauggauuuuugggagcagg	4915,83	3572,67	1,38	0,214
SEQ ID NO: 78	78	hsa-miR-338-5p	aacaauaucccuggugcugagug	1	1	1	0,214
SEQ ID NO: 79	79	hsa-miR-297	auguaugugugcaugugcaug	1	12,11	0,08	0,214
SEQ ID NO: 80	80	hsa-miR-1261	auggauaaggcuuuggcuu	1	10,44	0,1	0,214
SEQ ID NO: 81	81	hsa-miR-922	gcagcagagaauaggacuacguc	1	18,72	0,05	0,214
SEQ ID NO: 82	82	hsa-miR-185	uggagagaaaggcaguuccuga	15421,86	13307,74	1,16	0,214
SEQ ID NO: 83	83	hsa-miR-611	gcgaggaccccucggggucugac	30,44	18,11	1,68	0,214
SEQ ID NO: 84	84	hsa-miR-1272	gaugaugauggcagcaaauucugaaa	1	1	1	0,214
SEQ ID NO: 85	85	hsa-miR-1299	uucuggaauucugugugagagga	1	29,94	0,03	0,214
SEQ ID NO: 86	86	hsa-miR-335*	uuuuucauuauugcucugacc	1	1,56	0,64	0,215
SEQ ID NO: 87	87	hsa-miR-497	cagcagcacacugugguuugu	15,78	39,44	0,4	0,215
SEQ ID NO: 88	88	hsa-miR-1207-3p	ucagcuggcccucauuuc	1	18,11	0,06	0,223
SEQ ID NO: 89	89	hsa-miR-16	uagcagcacguaaauauuggcg	20349,58	24783,94	0,82	0,223
SEQ ID NO: 90	90	hsa-miR-1	uggaauguaaagaaguauguau	1	1	1	0,223
SEQ ID NO: 91	91	hsa-miR-1291	uggcccugacugaagaccagcagu	30,44	1	30,44	0,223
SEQ ID NO: 92	92	hsa-miR-138-2*	gcuauuucacgacaccaggguu	1	4,44	0,23	0,223
SEQ ID NO: 93	93	hsa-miR-136	acuccauuugucuuugaugugga	1	1,56	0,64	0,223
SEQ ID NO: 94	94	hsa-miR-548d-3p	caaaaaccacaguuucuuuugc	1	1	1	0,223
SEQ ID NO: 95	95	hsa-miR-561	caaaguuuaaagauccuugaaagu	1	1	1	0,223
SEQ ID NO: 96	96	hsa-miR-548h	aaaaguaaucgcggauuuuugc	1	1	1	0,223
SEQ ID NO: 97	97	hsa-miR-331-3p	gccccuggGccuauccuagaa	723,61	403,89	1,79	0,223
SEQ ID NO: 98	98	hsa-miR-186*	gcccaaaggugaauuuuuggg	1	1	1	0,230
SEQ ID NO: 99	99	hsa-miR-145	guccaguuuucccaggaauccCu	571,78	101,11	5,66	0,230
SEQ ID NO: 100	100	hsa-miR-17	caaagugcuuacagugcagguag	3976,97	5242,15	0,76	0,230
SEQ ID NO: 101	101	hsa-miR-30b	uguaaacauccuacacucagcu	5530,88	3303,71	1,67	0,239
SEQ ID NO: 102	102	hsa-let-7f-1*	cuauacaaucuauugccuuccc	1	1	1	0,250
SEQ ID NO: 103	103	hsa-miR-1305	uuuucaacucuaaaugggagaga	1	3,67	0,27	0,256
SEQ ID NO: 104	104	hsa-miR-129-5p	cuuuuugcggucugggcuugc	33,78	14,89	2,27	0,264
SEQ ID NO: 105	105	hsa-miR-1204	ucguggccugguCucCaauau	1	4,44	0,23	0,266
SEQ ID NO: 106	106	hsa-miR-106b*	ccgcacuguggguacuugcugc	901,96	137,56	6,56	0,266
SEQ ID NO: 107	107	hsa-miR-619	gaccuggacauguuugugcccagu	1	1	1	0,274

SEQ ID NO: 108	108	hsa-miR-34a*	caaucagcaaguauacugcccu	1	1	1	1	0,274
SEQ ID NO: 109	109	hsa-miR-652	aauggcgccacuaggguugug	1388,26	961,58	1,44	1	0,278
SEQ ID NO: 110	110	hsa-miR-1256	aggcauugacuucucacuagcu	1	1	1	1	0,278
SEQ ID NO: 111	111	hsa-miR-20b*	acuguaguaugggcacuuccag	1	4,44	0,23	1	0,278
SEQ ID NO: 112	112	hsa-miR-424*	caaaacgugaggcgcugcuau	34	46,11	0,74	1	0,278
SEQ ID NO: 113	113	hsa-miR-517a	aucgugcaucccuuuagagugu	1	1	1	1	0,278
SEQ ID NO: 114	114	hsa-miR-1284	ucuauacagacccuggcuuuuc	1	11,56	0,09	1	0,278
SEQ ID NO: 115	115	hsa-miR-199b-3p	acaguagucugcacauugguua	1	11,56	0,09	1	0,278
SEQ ID NO: 116	116	hsa-miR-599	guugugucaguuuaucaaac	1	1	1	1	0,285
SEQ ID NO: 117	117	hsa-miR-411	uaguagaccguauagcguacg	1	1	1	1	0,289
SEQ ID NO: 118	118	hsa-miR-23b	aucacauugccagggauuacc	3976,97	2099,43	1,89	1	0,291
SEQ ID NO: 119	119	hsa-miR-1302	uugggacauacuuaugcuaaa	1	1	1	1	0,291
SEQ ID NO: 120	120	hsa-miR-449a	uggcaguguauuguuagcuggu	1	1	1	1	0,291
SEQ ID NO: 121	121	hsa-miR-548f	aaaaacuguaauuacuuuu	1	1	1	1	0,291
SEQ ID NO: 122	122	hsa-miR-597	ugugucacucgaugaccacugu	1	1	1	1	0,291
SEQ ID NO: 123	123	hsa-miR-603	cacacacugcaauuacuuuugc	1	1,56	0,64	1	0,291
SEQ ID NO: 124	124	hsa-miR-1247	acccgucccguucgucccccgga	9,56	16,33	0,59	1	0,291
SEQ ID NO: 125	125	hsa-miR-1539	uccugcgcgucccagaugccc	5,22	21,11	0,25	1	0,291
SEQ ID NO: 126	126	hsa-miR-1911	ugaguaccgccaugucuguuggg	1	1,56	0,64	1	0,291
SEQ ID NO: 127	127	hsa-miR-325	ccuaguagguguccaguaagugu	1	14,89	0,07	1	0,291
SEQ ID NO: 128	128	hsa-miR-409-5p	agguuacccgagcaacuuugcau	1	1	1	1	0,291
SEQ ID NO: 129	129	hsa-miR-182	uuuggcaaugguagaacucacacu	7639,53	5073,69	1,51	1	0,291
SEQ ID NO: 130	130	hsa-miR-658	gggcgagggaaguaggucccguuggu	2425,74	1118,35	2,17	1	0,293
SEQ ID NO: 131	131	hsa-miR-215	augaccuaugaauugacagac	1085,22	463,22	2,34	1	0,298
SEQ ID NO: 132	132	hsa-miR-147b	gugugcggaaaugcuucugcua	1	1	1	1	0,298
SEQ ID NO: 133	133	hsa-miR-30d	uguaaacauccccgacuggaag	6349,31	4318,58	1,47	1	0,298
SEQ ID NO: 134	134	hsa-miR-378*	cuccugacuccaggucccugugu	111,78	28	3,99	1	0,298
SEQ ID NO: 135	135	hsa-miR-221*	accuggcauacaauguagauuu	1	1	1	1	0,298
SEQ ID NO: 136	136	hsa-miR-34b	caaucacuaacuccacugccau	2,67	19,78	0,13	1	0,298
SEQ ID NO: 137	137	hsa-miR-593*	aggcaccagccaggcauugcucagc	1	12,11	0,08	1	0,298
SEQ ID NO: 138	138	hsa-miR-552	aacaggugacuggguuagacaa	4	22,22	0,18	1	0,298
SEQ ID NO: 139	139	hsa-miR-378	acuggacuugGagucagaagg	284,22	21,56	13,19	1	0,299
SEQ ID NO: 140	140	hsa-miR-143*	ggugcagugcugcaucucuggu	1	1	1	1	0,299
SEQ ID NO: 141	141	hsa-miR-1266	ccucagggcuguagaacagggcu	17,11	29,94	0,57	1	0,299
SEQ ID NO: 142	142	hsa-miR-554	gcuaguccugacucagccagu	1	1	1	1	0,299
SEQ ID NO: 143	143	hsa-miR-631	agaccuggcccagaccucagc	2,67	13,72	0,19	1	0,299
SEQ ID NO: 144	144	hsa-miR-609	agggguuucucucaucucu	1	1	1	1	0,299

SEQ ID NO: 145	145	hsa-miR-30c	uguaaacauccuacacucucagc	8969,72	4779,31	1,88	0,299
SEQ ID NO: 146	146	hsa-miR-28-5p	aaggagcucacagucuauugag	454,22	108,56	4,18	0,302
SEQ ID NO: 147	147	hsa-miR-23a	aucacauugccagggauuucc	3428,42	1797,04	1,91	0,302
SEQ ID NO: 148	148	hsa-miR-645	ucuaggcuggguacugcuga	1	1	1	0,302
SEQ ID NO: 149	149	hsa-miR-647	guggcugcacucacuucccuuc	1	1	1	0,302
SEQ ID NO: 150	150	hsa-miR-302b*	acuuuaacaugguugcuuuc	1	1	1	0,302
SEQ ID NO: 151	151	hsa-miR-607	guucaaauccagaucuauaac	1	1	1	0,302
SEQ ID NO: 152	152	hsa-miR-1289	uggaguccaggaaucugcauuuu	1	4,44	0,23	0,302
SEQ ID NO: 153	153	hsa-miR-1324	ccagacagaaauucuaugcacuuuc	1	1	1	0,302
SEQ ID NO: 154	154	hsa-miR-513a-3p	uaaauuucaccuuucugagaagg	1	1	1	0,302
SEQ ID NO: 155	155	hsa-miR-939	uggggagcugaggcucuggggugg	203,17	58,78	3,46	0,302
SEQ ID NO: 156	156	hsa-miR-29b	uagcaccauuugaaaucaguguu	337,83	82,06	4,12	0,303
SEQ ID NO: 157	157	hsa-miR-665	accaggaggcugaggccccu	212	191,33	1,11	0,303
SEQ ID NO: 158	158	hsa-miR-18a	uaaggugcaucuagugcagauag	143,78	58,89	2,44	0,303
SEQ ID NO: 159	159	hsa-miR-1224-5p	gugaggacucgggaggugg	586,78	388	1,51	0,303
SEQ ID NO: 160	160	hsa-miR-10a*	caaauucguaucuagggaaua	1	4,44	0,23	0,303
SEQ ID NO: 161	161	hsa-miR-181a*	accaucgaccguugauuguacc	1	1	1	0,303
SEQ ID NO: 162	162	hsa-miR-218-2*	caugguucugucaagcaccgcg	1	1	1	0,303
SEQ ID NO: 163	163	hsa-miR-371-3p	aagugccgccaucuuuugagugu	1	1	1	0,303
SEQ ID NO: 164	164	hsa-miR-377	aucacacaaaggcaacuuuugu	1	1	1	0,303
SEQ ID NO: 165	165	hsa-miR-140-5p	cagugguuuacccuaugguag	1	1	1	0,303
SEQ ID NO: 166	166	hsa-miR-301a	cagugcaauaguauugucaaagc	16,78	21,56	0,78	0,303
SEQ ID NO: 167	167	hsa-miR-1277	uacguagauauauauguauuuu	1	1	1	0,303
SEQ ID NO: 168	168	hsa-miR-130a*	uucacaauggugcuacugugcugc	1	1	1	0,303
SEQ ID NO: 169	169	hsa-miR-1912	uacccagagcaugcagugugaa	1	1,56	0,64	0,303
SEQ ID NO: 170	170	hsa-miR-193b	aacuggcccucaaagucccgcu	1	1,56	0,64	0,303
SEQ ID NO: 171	171	hsa-miR-214*	ugccugucuacacuugcugugc	1	1	1	0,303
SEQ ID NO: 172	172	hsa-miR-216b	aaaucucugcaggcaaauguga	1	1	1	0,303
SEQ ID NO: 173	173	hsa-miR-302f	uaauugcuuccauguuu	1	1	1	0,303
SEQ ID NO: 174	174	hsa-miR-522*	cucuagagggaagcgcuuucug	4	12,11	0,33	0,303
SEQ ID NO: 175	175	hsa-miR-548j	aaaaguaauugcggucuuuggu	1	1	1	0,303
SEQ ID NO: 176	176	hsa-miR-568	auguauaaauguauacacac	1	1	1	0,303
SEQ ID NO: 177	177	hsa-miR-648	aagugugcagggcacuggu	1	1	1	0,303
SEQ ID NO: 178	178	hsa-miR-662	ucccacguuguggcccagcag	1	3,11	0,32	0,303
SEQ ID NO: 179	179	hsa-miR-222	agcuacaucuggcuacugggu	320,78	1	320,78	0,303
SEQ ID NO: 180	180	hsa-miR-1287	ugcuggaucagugguucgagucc	1	12,44	0,08	0,303
SEQ ID NO: 181	181	hsa-miR-891b	ugcaacuuaccugagucauuga	1	1	1	0,303

SEQ ID NO: 182	182	hsa-miR-342-3p	ucucacacagaaaucgcacccgu	3428,42	2319,9	1,48		0,303
SEQ ID NO: 183	183	hsa-miR-512-3p	aagugcugucauagcugaggguc	1	1	1		0,303
SEQ ID NO: 184	184	hsa-miR-623	aucccuugcaggggcugguugggu	1	1	1		0,303
SEQ ID NO: 185	185	hsa-miR-208b	auaagacgaacaaaaggguuugu	6,78	1	6,78		0,303
SEQ ID NO: 186	186	hsa-miR-16-1*	ccaguauuaacugugcugcuga	1	1,56	0,64		0,306
SEQ ID NO: 187	187	hsa-miR-551b	gcgacccauacuugguuucag	1	1	1		0,308
SEQ ID NO: 188	188	hsa-miR-146b-3p	ugcccuguggacucaguucugg	1	1	1		0,308
SEQ ID NO: 189	189	hsa-miR-520b	aaagugcuucccuuuagagggg	1	1	1		0,309
SEQ ID NO: 190	190	hsa-miR-449b	aggcaguguauugcuagcuggc	1	1	1		0,311
SEQ ID NO: 191	191	hsa-miR-520g	acaaagugcuucccuuuagagugu	1	1	1		0,312
SEQ ID NO: 192	192	hsa-miR-24-2*	ugccuacugagcugaaacacag	1	1	1		0,314
SEQ ID NO: 193	193	hsa-miR-518f	gaaagcgcuucucuuagagg	1	1	1		0,318
SEQ ID NO: 194	194	hsa-miR-649	aaaccuguguguucaagaguc	1	1	1		0,318
SEQ ID NO: 195	195	hsa-miR-32	uauugcacauuacuaaguugca	1	3,67	0,27		0,318
SEQ ID NO: 196	196	hsa-miR-151-3p	cuagacugaagcuccuugagg	344,56	90,78	3,8		0,319
SEQ ID NO: 197	197	hsa-miR-454	uagugcaauauugcuuauagggu	90,44	26,56	3,41		0,319
SEQ ID NO: 198	198	hsa-miR-101	uacaguacugugauaacugaa	94,56	138,61	0,68		0,319
SEQ ID NO: 199	199	hsa-miR-19b-1*	aguuuugcaggguuugcauccagc	1	1	1		0,319
SEQ ID NO: 200	200	hsa-miR-509-5p	uacugcagacaguggcaauca	1	1	1		0,319
SEQ ID NO: 201	201	hsa-miR-144	uacaguauagauguauguacu	40,67	82,06	0,5		0,319
SEQ ID NO: 202	202	hsa-miR-508-5p	uacuccagagggcgucacucaug	22,67	31,33	0,72		0,319
SEQ ID NO: 203	203	hsa-miR-569	aguuaaugaauccuggaaagu	1	1	1		0,319
SEQ ID NO: 204	204	hsa-miR-636	ugugcuugcucguccccgcccgca	46,89	49,22	0,95		0,319
SEQ ID NO: 205	205	hsa-miR-937	auccgcgcucugacuccugcc	4	10,44	0,38		0,319
SEQ ID NO: 206	206	hsa-miR-346	ugucugcccgcaugccugccucu	1	1	1		0,319
SEQ ID NO: 207	207	hsa-miR-506	uaaggcacccuucugaguaga	1	1	1		0,319
SEQ ID NO: 208	208	hsa-miR-379*	uauguaacaugguccacuaacu	1	1,56	0,64		0,319
SEQ ID NO: 209	209	hsa-miR-1184	ccugcagcgacuugauggcuucc	1	1	1		0,319
SEQ ID NO: 210	210	hsa-miR-579	uucauuugguauaaaccgcgauu	1	1	1		0,319
SEQ ID NO: 211	211	hsa-miR-23b*	ugggucccuggcaugcugauuu	1	1	1		0,321
SEQ ID NO: 212	212	hsa-miR-1262	augggugaauuuguagaaggau	1	11,33	0,09		0,321
SEQ ID NO: 213	213	hsa-miR-153	uugcauagucacaaaagugauc	1	1	1		0,321
SEQ ID NO: 214	214	hsa-miR-520e	aaagugcuucccuuuugagggg	1	1	1		0,321
SEQ ID NO: 215	215	hsa-miR-632	gugucugcuucccuguggga	2,67	4,44	0,6		0,321
SEQ ID NO: 216	216	hsa-miR-106a*	cugcaauguaagcacuucuuac	1	4,44	0,23		0,321
SEQ ID NO: 217	217	hsa-miR-31*	ugcuaugccaacauauugccau	1	1	1		0,321
SEQ ID NO: 218	218	hsa-miR-33b*	cagugccucggcagugcagccc	1	1	1		0,321

SEQ ID NO: 219	219	hsa-miR-654-3p	uaugucugcugaccaucaccuu	1	1	1	0,321
SEQ ID NO: 220	220	hsa-miR-99b*	caagcucgugucuguggguccg	1	1	1	0,323
SEQ ID NO: 221	221	hsa-miR-1278	uaguacugugcauaucaucuau	1	1	1	0,324
SEQ ID NO: 222	222	hsa-miR-135b	uauggcuuuucauuccuauguga	1	1	1	0,324
SEQ ID NO: 223	223	hsa-let-7c*	uagaguuacacccugggaguua	1	1	1	0,324
SEQ ID NO: 224	224	hsa-miR-1468	cuccguuugccuguuucgccug	1	4,22	0,24	0,324
SEQ ID NO: 225	225	hsa-miR-374b*	cuuagcaggugugauuuaucauu	1	1	1	0,324
SEQ ID NO: 226	226	hsa-miR-514	auugacacuucugugaguaga	1	1	1	0,324
SEQ ID NO: 227	227	hsa-miR-590-3p	uaauuuuauguauaaagcuagu	1	1	1	0,324
SEQ ID NO: 228	228	hsa-miR-606	aaacuacugaaaaucaaagau	1	1	1	0,324
SEQ ID NO: 229	229	hsa-miR-369-3p	aauaauacaugguugaucuuu	1	1	1	0,324
SEQ ID NO: 230	230	hsa-miR-488	uugaaaggcuauuucuugguc	1	1	1	0,324
SEQ ID NO: 231	231	hsa-miR-128	ucacagugaaccggucucuuu	773,97	21,56	35,91	0,324
SEQ ID NO: 232	232	hsa-miR-362-5p	aauccuuggaaccuagugugagu	260,22	14,89	17,48	0,324
SEQ ID NO: 233	233	hsa-miR-671-5p	aggaagcccuggagggcuggag	272	168,11	1,62	0,324
SEQ ID NO: 234	234	hsa-miR-874	cugcccuggcccgagggaccga	34	35,83	0,95	0,327
SEQ ID NO: 235	235	hsa-miR-1911*	caccaggcauugugucucc	1	1	1	0,327
SEQ ID NO: 236	236	hsa-miR-1292	ugggaacggguuccggcagacgcug	252,11	158,89	1,59	0,328
SEQ ID NO: 237	237	hsa-miR-194	uguaacagcaacuccaugugga	1853,1	1440,75	1,29	0,329
SEQ ID NO: 238	238	hsa-miR-15b	uagcagcacaucaugguuuaca	20349,58	23734,72	0,86	0,329
SEQ ID NO: 239	239	hsa-miR-342-5p	aggguguaucucugugauuga	82,44	73,33	1,12	0,329
SEQ ID NO: 240	240	hsa-miR-125b-2*	ucacaagucaggcucuugggac	1	3,67	0,27	0,329
SEQ ID NO: 241	241	hsa-miR-1297	uucaaguaauucaggug	1	1	1	0,329
SEQ ID NO: 242	242	hsa-miR-933	ugugcgcagggagaccucuccc	18,11	28,44	0,64	0,329
SEQ ID NO: 243	243	hsa-miR-493*	uuguacaugguaggcuuucauu	1,56	3,11	0,5	0,329
SEQ ID NO: 244	244	hsa-miR-105	ucaaaugcucagacuccuguggu	1	1	1	0,329
SEQ ID NO: 245	245	hsa-miR-141	uaacacugucugguaaagaugg	1	1	1	0,329
SEQ ID NO: 246	246	hsa-miR-181c*	aaccaucgaccguugagugguggac	1	1	1	0,329
SEQ ID NO: 247	247	hsa-miR-193a-3p	aacuggccuacaaaguccagu	20,83	21,11	0,99	0,329
SEQ ID NO: 248	248	hsa-miR-302c	uaagugcuuccauguuucagugg	1	1	1	0,329
SEQ ID NO: 249	249	hsa-miR-485-5p	agaggcuggccgugaugaauuc	39,67	50,89	0,78	0,329
SEQ ID NO: 250	250	hsa-miR-499-3p	aacaucacagcaagucugugcu	1	1	1	0,329
SEQ ID NO: 251	251	hsa-miR-545	ucagcaaacauuuauuguguugc	1	1	1	0,329
SEQ ID NO: 252	252	hsa-miR-548b-5p	aaaaguaauugugguuuuggcc	1	1	1	0,329
SEQ ID NO: 253	253	hsa-miR-549	ugacaacuaugcaugagcucu	1	1	1	0,329
SEQ ID NO: 254	254	hsa-miR-576-5p	auucuaauuucuccacgucuuu	1	4,22	0,24	0,329
SEQ ID NO: 255	255	hsa-miR-577	uagauaaaauauugguaccug	1	1	1	0,329

SEQ ID NO: 256	256	hsa-miR-583	caaagaggaaggucccauuac	49,56	55,22	0,9	0,329
SEQ ID NO: 257	257	hsa-miR-587	uuuccauaggugaugagucac	1	1,56	0,64	0,329
SEQ ID NO: 258	258	hsa-miR-624	cacaagguauugguauuaccu	1	1	1	0,329
SEQ ID NO: 259	259	hsa-miR-646	aagcagcugccucugaggc	1	1	1	0,329
SEQ ID NO: 260	260	hsa-miR-655	auaauacaugguuaaccucuuu	1	1	1	0,329
SEQ ID NO: 261	261	hsa-miR-885-5p	uccauuacacuacccugccucu	5,56	28	0,2	0,329
SEQ ID NO: 262	262	hsa-miR-194*	ccaguggggcugcuguaaucug	6,78	5,11	1,33	0,329
SEQ ID NO: 263	263	hsa-miR-299-5p	ugguuuaccgucccacauacau	1	1	1	0,329
SEQ ID NO: 264	264	hsa-miR-337-3p	cuccuauaugaugccuuucuuc	1	4,44	0,23	0,329
SEQ ID NO: 265	265	hsa-miR-493	ugaaggucuacuguugugccagg	1	1	1	0,329
SEQ ID NO: 266	266	hsa-miR-497*	caaaccacacuguggguuaga	1	1	1	0,329
SEQ ID NO: 267	267	hsa-miR-519a	aaagugcauccuuuuagagugu	1	1	1	0,329
SEQ ID NO: 268	268	hsa-miR-99a*	caagcucgcuucuaugggucug	1	1	1	0,329
SEQ ID NO: 269	269	hsa-miR-1280	ucccacccgcugccaccc	237,33	158,89	1,49	0,329
SEQ ID NO: 270	270	hsa-miR-523*	cucuagagggaagcgcuuucug	6,78	18,72	0,36	0,329
SEQ ID NO: 271	271	hsa-miR-198	ggucccagaggggagauagguuc	428,39	382	1,12	0,329
SEQ ID NO: 272	272	hsa-miR-934	ugucuacuacuggagacacugg	1	1	1	0,329
SEQ ID NO: 273	273	hsa-miR-30d*	cuuucagucagauguuugcugc	1	1	1	0,331
SEQ ID NO: 274	274	hsa-miR-452*	cucaucugcaaagaaguaaggug	1	1	1	0,331
SEQ ID NO: 275	275	hsa-miR-548b-3p	caagaaccucaguugcuuuugu	1	1	1	0,331
SEQ ID NO: 276	276	hsa-miR-586	uaugcauuguauuuuuaggucc	1	1	1	0,331
SEQ ID NO: 277	277	hsa-miR-92b	uauugcacucgucccggccucc	4260,36	5530,88	0,77	0,331
SEQ ID NO: 278	278	hsa-miR-517b	ucgugcaucccuuuagaguguu	1	1	1	0,331
SEQ ID NO: 279	279	hsa-miR-548a-3p	caaaacuggcaauuacuuuugc	1	1	1	0,331
SEQ ID NO: 280	280	hsa-miR-875-5p	uauaccucaguuuuaucaggug	1	1	1	0,335
SEQ ID NO: 281	281	hsa-miR-431*	caggucgucuugcagggcuucu	1	1	1	0,336
SEQ ID NO: 282	282	hsa-miR-384	auucccuagaaauuguucaua	1	1	1	0,336
SEQ ID NO: 283	283	hsa-miR-644	aguguggcuuucuuagagc	1	1	1	0,338
SEQ ID NO: 284	284	hsa-miR-1185	agaggauacccuuuguauguu	1	1	1	0,341
SEQ ID NO: 285	285	hsa-miR-29b-2*	cuggcuuucacauggugggcuuag	34,44	47,22	0,73	0,341
SEQ ID NO: 286	286	hsa-miR-489	gugacaucacauaacggcagc	1	1	1	0,341
SEQ ID NO: 287	287	hsa-miR-566	gggcgccugugaucccaac	1	1	1	0,341
SEQ ID NO: 288	288	hsa-miR-1538	cggccccgggcugcugcuguuccu	48	18,72	2,56	0,341
SEQ ID NO: 289	289	hsa-miR-28-3p	cacuagauugugagcuccugga	29,11	21,11	1,38	0,343
SEQ ID NO: 290	290	hsa-let-7f-2*	cuauacagucuacugucuuuccc	1	1	1	0,343
SEQ ID NO: 291	291	hsa-miR-1322	gaugaugcugcugaugcug	1,56	6,56	0,24	0,343
SEQ ID NO: 292	292	hsa-miR-1827	ugaggcaguagauugaau	9,56	4,44	2,15	0,343

SEQ ID NO: 293	293	hsa-miR-192*	cugccaauuccauaggucacag	1	1	1	1		0,343
SEQ ID NO: 294	294	hsa-miR-302e	uaaugugcuuccaugcuu	1	1	1	1		0,343
SEQ ID NO: 295	295	hsa-miR-411*	uauguaacacgguccacuaacc	1	1,56	0,64			0,343
SEQ ID NO: 296	296	hsa-miR-424	cagcagcaauucauguuuugaa	53	40,78	1,3			0,343
SEQ ID NO: 297	297	hsa-miR-582-3p	uaacugguugaacaacugaacc	4	4,22	0,95			0,343
SEQ ID NO: 298	298	hsa-miR-629*	guucuccaacguaaagcccagc	31,56	33,56	0,94			0,343
SEQ ID NO: 299	299	hsa-miR-491-3p	cuuaugcaagauucccuucuac	1	1	1			0,343
SEQ ID NO: 300	300	hsa-miR-519b-3p	aaagugcauccuuuuagagguu	1	1	1			0,343
SEQ ID NO: 301	301	hsa-miR-1197	uaggacacauggucuacuucu	1	1,56	0,64			0,343
SEQ ID NO: 302	302	hsa-miR-127-5p	cugaagcucagagggcucugau	5,56	21,56	0,26			0,343
SEQ ID NO: 303	303	hsa-miR-1286	ugcaggaccaagaugagcccu	12,44	12	1,04			0,343
SEQ ID NO: 304	304	hsa-miR-132*	accguggcuuucgauuguuacu	1	1	1			0,343
SEQ ID NO: 305	305	hsa-miR-33b	gugcauugcuguugcauugc	1	1,56	0,64			0,343
SEQ ID NO: 306	306	hsa-miR-553	aaaacggugagauuuuguuuu	1	1	1			0,343
SEQ ID NO: 307	307	hsa-miR-620	auggagauagauauagaaau	1	1,56	0,64			0,343
SEQ ID NO: 308	308	hsa-miR-708	aaggagcuuacaaucuagcuggg	1	1	1			0,343
SEQ ID NO: 309	309	hsa-miR-892b	cacuggcuccuuucuggguaga	1	1	1			0,343
SEQ ID NO: 310	310	hsa-miR-520h	acaaaugugcuucccuuuagagu	1	1	1			0,343
SEQ ID NO: 311	311	hsa-miR-500*	augcaccugggcaaggauucug	254,28	8,33	30,51			0,343
SEQ ID NO: 312	312	hsa-miR-551b*	gaaaucaagcguggguugagacc	97,33	87,67	1,11			0,343
SEQ ID NO: 313	313	hsa-miR-186	caaagaauucuccuuuugggcu	39,67	18,72	2,12			0,343
SEQ ID NO: 314	314	hsa-miR-558	ugagcugcuguaccaaaau	1	1	1			0,345
SEQ ID NO: 315	315	hsa-miR-26a	uucaaguaauccaggauaggcu	8969,72	11137,35	0,81			0,345
SEQ ID NO: 316	316	hsa-miR-1263	augguacccuggcauacugagu	1	1	1			0,345
SEQ ID NO: 317	317	hsa-miR-211	uucccuuugucauccuucgccu	1	3,67	0,27			0,345
SEQ ID NO: 318	318	hsa-miR-1304	uuugaggcuacagugagaugug	20,56	28	0,73			0,345
SEQ ID NO: 319	319	hsa-miR-220b	ccaccaccgugucugacacuu	2,67	1	2,67			0,345
SEQ ID NO: 320	320	hsa-miR-891a	ugcaacgaaccugagccacuga	6,78	6,56	1,03			0,345
SEQ ID NO: 321	321	hsa-miR-1253	agagaagaagaucagccugca	1	1	1			0,345
SEQ ID NO: 322	322	hsa-miR-1205	ucugcagguuugcuuugag	1	1	1			0,345
SEQ ID NO: 323	323	hsa-miR-137	uuauugcuuaagaauacgcguag	1	1	1			0,345
SEQ ID NO: 324	324	hsa-miR-154*	aaucauacacgguugaccuauu	1	1	1			0,345
SEQ ID NO: 325	325	hsa-miR-555	aggguaagcugaaccucugau	1	1	1			0,345
SEQ ID NO: 326	326	hsa-miR-887	gugaacgggcgccaucccgagg	22,67	31,33	0,72			0,345
SEQ ID NO: 327	327	hsa-miR-363	aauugcacgguauccaucugua	2790,67	3303,71	0,84			0,345
SEQ ID NO: 328	328	hsa-miR-1537	aaaaccgucuaguuacaguugu	1	1	1			0,345
SEQ ID NO: 329	329	hsa-miR-219-1-3p	agaguugagucuggacgucccg	1	1	1			0,345

SEQ ID NO: 330	330	hsa-miR-220a	ccacaccguaucugacacuuu	1	1	1		0,345
SEQ ID NO: 331	331	hsa-miR-222*	cucaguagccaguguagauccu	1	1	1		0,345
SEQ ID NO: 332	332	hsa-miR-323-3p	cacauuacacggucgaccucu	1	1	1		0,345
SEQ ID NO: 333	333	hsa-miR-376b	aucauagaggaaaauccauguu	1	6,56	0,15		0,345
SEQ ID NO: 334	334	hsa-miR-490-5p	ccauggaucuccaggugggu	1	4,22	0,24		0,345
SEQ ID NO: 335	335	hsa-miR-523	gaacgcgcuucccuauagagggu	1	1	1		0,345
SEQ ID NO: 336	336	hsa-miR-302a*	acuuaaacguggauguacuugcu	1	1	1		0,345
SEQ ID NO: 337	337	hsa-miR-27b*	agagcuuagcugauuggugaac	8,44	4,22	2		0,345
SEQ ID NO: 338	338	hsa-miR-591	agaccauggguucucauugu	1	1	1		0,345
SEQ ID NO: 339	339	hsa-miR-888	uacucaaaaagcugucaguca	1	1	1		0,345
SEQ ID NO: 340	340	hsa-miR-376a*	guagauucuccuucuagagua	1	1	1		0,345
SEQ ID NO: 341	341	hsa-miR-618	aaacucuacuugucccuucugagu	1	1	1		0,346
SEQ ID NO: 342	342	hsa-miR-1182	gagggucuuggagggaugugac	708,06	674,69	1,05		0,348
SEQ ID NO: 343	343	hsa-miR-532-3p	ccucccacacccaaggcuugca	88,11	114,67	0,77		0,348
SEQ ID NO: 344	344	hsa-miR-181b	aacauucauugcugucggugggu	61,11	27,78	2,2		0,348
SEQ ID NO: 345	345	hsa-miR-521	aacgcacuucccuuuagagugu	1	4,44	0,23		0,348
SEQ ID NO: 346	346	hsa-miR-545*	ucaguaaauguuuauuagauga	1	1	1		0,348
SEQ ID NO: 347	347	hsa-miR-9*	auaaagcuagauaaccgaaagu	1	1	1		0,348
SEQ ID NO: 348	348	hsa-miR-920	ggggagcuguggaagcagua	50,56	80,11	0,63		0,348
SEQ ID NO: 349	349	hsa-miR-571	ugaguggccaucugagugag	1	1	1		0,348
SEQ ID NO: 350	350	hsa-miR-635	acuugggcacugaaacaaugucc	1	1	1		0,348
SEQ ID NO: 351	351	hsa-miR-200b	uaauacugccugguaaugauga	1	1	1		0,349
SEQ ID NO: 352	352	hsa-miR-455-5p	uaugugccuuuggacuacaucg	1	1	1		0,349
SEQ ID NO: 353	353	hsa-miR-876-3p	ugguguuuacaaagguaaauca	1	1	1		0,349
SEQ ID NO: 354	354	hsa-miR-373*	acucaaaauggggcgcuuucc	79,67	116,33	0,68		0,349
SEQ ID NO: 355	355	hsa-miR-146a*	ccucugaaauucaguucuucag	1	1	1		0,350
SEQ ID NO: 356	356	hsa-miR-122*	aacgccauuaucacacuaaaua	1	1	1		0,350
SEQ ID NO: 357	357	hsa-miR-450b-3p	uugggaucauuuugcauccaua	1	1	1		0,350
SEQ ID NO: 358	358	hsa-miR-24	uggcucaguucagcaggaacag	511,89	331,06	1,55		0,352
SEQ ID NO: 359	359	hsa-miR-484	ucaggcucaguccccucccgau	3778,89	2575,72	1,47		0,352
SEQ ID NO: 360	360	hsa-miR-103-as	ucauagcccuguacaaugcugcu	1	1	1		0,352
SEQ ID NO: 361	361	hsa-miR-380	uauguaauaugguccacaucuu	1	1	1		0,352
SEQ ID NO: 362	362	hsa-miR-513a-5p	uucacagggaggugucau	450,61	348,22	1,29		0,352
SEQ ID NO: 363	363	hsa-miR-509-3-5p	uacugcagacguggcaaucaug	1	1	1		0,352
SEQ ID NO: 364	364	hsa-miR-873	gcaggaacuugugagcuccu	1	5,11	0,2		0,352
SEQ ID NO: 365	365	hsa-miR-556-5p	gaugagcucauuguaaauugag	1	1	1		0,353
SEQ ID NO: 366	366	hsa-miR-369-5p	agaucgaccguguuauauucgc	1	1	1		0,354

SEQ ID NO: 367	367	hsa-miR-653	guguugaaacaaucucuacug	1	1	1	1	0,354
SEQ ID NO: 368	368	hsa-miR-767-3p	ucugcucauaccccaugguuucu	16,78	18,72	0,9		0,354
SEQ ID NO: 369	369	hsa-miR-516a-3p	ugcuucccuuucagagggu	1	1	1		0,354
SEQ ID NO: 370	370	hsa-miR-520c-3p	aaagugcuucccuuuagagggu	1	1	1		0,354
SEQ ID NO: 371	371	hsa-miR-708*	caacuagacugugagcuucuag	1	1	1		0,354
SEQ ID NO: 372	372	hsa-miR-924	agagucuugugaucucugc	1	1	1		0,354
SEQ ID NO: 373	373	hsa-miR-520d-5p	cuacaaagggaagcccuuuc	37,67	44,89	0,84		0,354
SEQ ID NO: 374	374	hsa-miR-512-5p	cacucagccuugagggcacuuuc	1	4,22	0,24		0,354
SEQ ID NO: 375	375	hsa-miR-374a*	cuuaucagauuguaauugcuuaauu	1	1	1		0,355
SEQ ID NO: 376	376	hsa-miR-921	cuagugagggacagaaccaggauuc	260,22	207,33	1,26		0,357
SEQ ID NO: 377	377	hsa-miR-1206	uguucaguagaugauguuuaaagc	1	10,44	0,1		0,357
SEQ ID NO: 378	378	hsa-miR-1259	auauaugaugacuuagcuuuuu	112,44	106,11	1,06		0,357
SEQ ID NO: 379	379	hsa-miR-525-5p	cuccagagggaugcacuuuucu	1,89	4,22	0,45		0,357
SEQ ID NO: 380	380	hsa-miR-200a*	caucuuaccggacagugcugga	1	1	1		0,357
SEQ ID NO: 381	381	hsa-miR-1293	ugggugguccuggagauuuguguc	50,56	21,11	2,39		0,357
SEQ ID NO: 382	382	hsa-miR-372	aaagugcugcgacauuugagcgu	1	1	1		0,357
SEQ ID NO: 383	383	hsa-miR-548a-5p	aaaaguaauugcgaguuuuacc	1	1	1		0,357
SEQ ID NO: 384	384	hsa-miR-548k	aaaaguacuugcggauuuugcu	1	1	1		0,357
SEQ ID NO: 385	385	hsa-miR-1300	uugagaaggaggcugcug	327,33	192,67	1,7		0,357
SEQ ID NO: 386	386	hsa-miR-1264	caagucuuauuugagcaccuguu	1	1	1		0,357
SEQ ID NO: 387	387	hsa-miR-551a	gcgacccacucuuggucuucca	1	1	1		0,357
SEQ ID NO: 388	388	hsa-miR-196b	uagguaguuuccuguuguuggg	1	21,56	0,05		0,357
SEQ ID NO: 389	389	hsa-miR-32*	caauuuaguguguguguauauuu	1	1	1		0,357
SEQ ID NO: 390	390	hsa-miR-33a	gugcauuguaguugcauugca	1	1	1		0,357
SEQ ID NO: 391	391	hsa-miR-548d-5p	aaaaguaauugcggauuuuugcc	1	1	1		0,357
SEQ ID NO: 392	392	hsa-miR-616	agucauuggagggguuugagcag	27	30,44	0,89		0,357
SEQ ID NO: 393	393	hsa-miR-876-5p	uggauuucuuugugaaucacca	1	1	1		0,357
SEQ ID NO: 394	394	hsa-miR-508-3p	ugauuguagccuuuuggaguaga	1	1	1		0,357
SEQ ID NO: 395	395	hsa-miR-26a-2*	ccuauucuugauuacuuguuuc	1	1	1		0,357
SEQ ID NO: 396	396	hsa-miR-187	ucgugucuugugguuugcagccgg	1	4,44	0,23		0,357
SEQ ID NO: 397	397	hsa-miR-199a-3p	acaguagucugcacauuggguua	1	19,78	0,05		0,357
SEQ ID NO: 398	398	hsa-miR-96*	aaucaugugcagugccaauaug	1	1	1		0,358
SEQ ID NO: 399	399	hsa-miR-18b	uaaggugcaucuagugcaguuag	137,22	234,33	0,59		0,359
SEQ ID NO: 400	400	hsa-miR-432*	cuggaugguccucccaugucu	1	1	1		0,359
SEQ ID NO: 401	401	hsa-miR-509-3p	ugauugguacgucuguggguag	1,89	1,56	1,21		0,359
SEQ ID NO: 402	402	hsa-miR-1183	cacuguaggugauggugagagugggca	120,44	82,89	1,45		0,359
SEQ ID NO: 403	403	hsa-miR-626	agcugucugaaaauguculu	1	1	1		0,359

SEQ ID NO: 404	404	hsa-miR-513b	uucacaaggaggugucauuuau	91,17	72,22	1,26		0,359
SEQ ID NO: 405	405	hsa-miR-617	agacuucccauuugaaggugcc	2,67	4,44	0,6		0,362
SEQ ID NO: 406	406	hsa-miR-9	ucuuugguuaucuagcuguauga	1	1	1		0,362
SEQ ID NO: 407	407	hsa-miR-519e	aagugccuccuuuuagagguu	1	1	1		0,362
SEQ ID NO: 408	408	hsa-miR-204	uucccuuugucauccuaugccu	1	1	1		0,362
SEQ ID NO: 409	409	hsa-miR-29c	uagcaccauuugaaaucgguua	340,89	36,11	9,44		0,363
SEQ ID NO: 410	410	hsa-miR-1268	cgggcgugguguggggg	901,96	1056,33	0,85		0,363
SEQ ID NO: 411	411	hsa-miR-122	uggagugugacaaugguguug	17,11	21,11	0,81		0,363
SEQ ID NO: 412	412	hsa-miR-7-2*	caacaaaucccagucuaccuaa	13	12,11	1,07		0,363
SEQ ID NO: 413	413	hsa-miR-15a*	caggccauauugugcugccuca	1	1	1		0,363
SEQ ID NO: 414	414	hsa-miR-181d	aacauucauuguugucgguggguu	2,67	2,67	1		0,363
SEQ ID NO: 415	415	hsa-miR-219-5p	ugauuguccaaacgcaauucu	1	1	1		0,363
SEQ ID NO: 416	416	hsa-miR-302d	uaagugcuuccauguuugagugu	1	1	1		0,363
SEQ ID NO: 417	417	hsa-miR-34a	uggcagugucuuagcugguugu	1	1	1		0,363
SEQ ID NO: 418	418	hsa-miR-410	aauauaacacagaugccugu	1	1	1		0,363
SEQ ID NO: 419	419	hsa-miR-33a*	caauguuuccacagugcaucac	1	1	1		0,363
SEQ ID NO: 420	420	hsa-miR-502-3p	aaugcaccugggcaaggauuca	364,22	14,89	24,46		0,363
SEQ ID NO: 421	421	hsa-miR-379	ugguagacuauggaacguagg	25,56	39,22	0,65		0,363
SEQ ID NO: 422	422	hsa-miR-498	uuucaagccagggggcguuuuuc	101,11	58,78	1,72		0,363
SEQ ID NO: 423	423	hsa-miR-518d-5p	cucuagagggaagcacuuucug	36,78	19,78	1,86		0,363
SEQ ID NO: 424	424	hsa-miR-556-3p	auauuaccauuagcucacuuu	1	1	1		0,363
SEQ ID NO: 425	425	hsa-miR-502-5p	auccuugcaucugggugcua	6,78	1	6,78		0,363
SEQ ID NO: 426	426	hsa-miR-31	aggcaagaugcuggcauagcu	8,44	3,67	2,3		0,363
SEQ ID NO: 427	427	hsa-miR-100	aacccguagauccgaacuugug	212	98,56	2,15		0,363
SEQ ID NO: 428	428	hsa-miR-296-3p	gaggguuggguggaggcucucc	606,46	408,44	1,48		0,363
SEQ ID NO: 429	429	hsa-miR-615-5p	ggggguccccggugcucggauc	34	12,11	2,81		0,363
SEQ ID NO: 430	430	hsa-miR-21*	caacaccagucgauggcugu	1	1	1		0,364
SEQ ID NO: 431	431	hsa-miR-657	ggcagguucucacccucuagg	1	1	1		0,364
SEQ ID NO: 432	432	hsa-miR-651	uuuaggauaagcuugacuuuug	1	1	1		0,364
SEQ ID NO: 433	433	hsa-miR-765	uggaggagaaggaaggugaug	1085,22	1101,78	0,98		0,364
SEQ ID NO: 434	434	hsa-miR-548m	caaagguauuuguggguuuug	1	1	1		0,364
SEQ ID NO: 435	435	hsa-miR-219-2-3p	agaauugugcugacaucugu	4	1	4		0,364
SEQ ID NO: 436	436	hsa-miR-501-3p	aaugcacccgggcaaggauucu	286,11	21,56	13,27		0,364
SEQ ID NO: 437	437	hsa-miR-302a	uaagugcuuccauguuuugguga	1	1	1		0,365
SEQ ID NO: 438	438	hsa-miR-202*	uuccuaugcauauaccuucuuu	1	1	1		0,365
SEQ ID NO: 439	439	hsa-miR-206	uggaauguaaggaagugugugg	15,78	28,44	0,55		0,365
SEQ ID NO: 440	440	hsa-miR-520d-3p	aaagugcuucucuuuggugggu	1	1	1		0,365

SEQ ID NO: 441	441	hsa-miR-548i	aaaaguaauugcggauuuugcc	1	1	1	1	0,367
SEQ ID NO: 442	442	hsa-miR-511	gugucuuuugcucugcaguca	1	1	1	1	0,368
SEQ ID NO: 443	443	hsa-miR-30a	uguaaacauccucgacuggaag	1175,03	1056,33	1,11	1	0,368
SEQ ID NO: 444	444	hsa-miR-1224-3p	ccccaccuccucuccuccag	25,56	67,44	0,38	1	0,368
SEQ ID NO: 445	445	hsa-miR-525-3p	gaaggcgcuucccuuuagagcg	1	1	1	1	0,368
SEQ ID NO: 446	446	hsa-miR-1225-5p	gugguacggcccagugggggg	142,83	194	0,74	1	0,370
SEQ ID NO: 447	447	hsa-miR-223*	cguguauuugacaagcugaguu	1	4,44	0,23	1	0,370
SEQ ID NO: 448	448	hsa-miR-615-3p	uccgagccuggguccuccuu	1	1	1	1	0,372
SEQ ID NO: 449	449	hsa-miR-570	cgaaaacagcaauuaccuuugc	1	1	1	1	0,373
SEQ ID NO: 450	450	hsa-miR-320a	aaaagcuggguugagagggcga	10047,96	8310,31	1,21	1	0,373
SEQ ID NO: 451	451	hsa-miR-770-5p	uccaguaccacguguccagggcca	9,11	11,33	0,8	1	0,373
SEQ ID NO: 452	452	hsa-miR-582-5p	uuacaguugucaaccaguuacu	1	3,11	0,32	1	0,375
SEQ ID NO: 453	453	hsa-miR-590-5p	gagcuuauucauaaaaguugcag	1	1	1	1	0,376
SEQ ID NO: 454	454	hsa-miR-659	cuugguucagggaggguucccca	150,56	133,11	1,13	1	0,377
SEQ ID NO: 455	455	hsa-miR-1251	acucuagcugccaaaggcgcu	1	1	1	1	0,377
SEQ ID NO: 456	456	hsa-miR-664	uauucauuuauccccagccuaca	8,44	11,33	0,75	1	0,377
SEQ ID NO: 457	457	hsa-miR-488*	cccagauaauggcacucucaa	1	1	1	1	0,377
SEQ ID NO: 458	458	hsa-miR-548g	aaaacuguaauuacuuuuguac	1	1	1	1	0,377
SEQ ID NO: 459	459	hsa-miR-802	caguaacaaagauucauccuugu	1	1	1	1	0,377
SEQ ID NO: 460	460	hsa-miR-542-5p	ucggggaucaucaugucacgaga	6,78	1	6,78	1	0,377
SEQ ID NO: 461	461	hsa-miR-190	ugauauguugauauauuaggu	1	1	1	1	0,377
SEQ ID NO: 462	462	hsa-miR-218-1*	augguuccgucaagcaccaugg	1	1	1	1	0,377
SEQ ID NO: 463	463	hsa-miR-367*	acuguugcuaauaugcaacucu	1	1	1	1	0,377
SEQ ID NO: 464	464	hsa-miR-450a	uuuugcgauguguuccuaauau	1	1	1	1	0,377
SEQ ID NO: 465	465	hsa-miR-367	aauugcacuuuagcaaugguga	1	1	1	1	0,378
SEQ ID NO: 466	466	hsa-miR-124	uaaggcacgcggugaaugcc	20,56	11,33	1,81	1	0,380
SEQ ID NO: 467	467	hsa-miR-767-5p	ugcaccauggguugucugagcaug	1	1	1	1	0,380
SEQ ID NO: 468	468	hsa-miR-200c	uaauacugccggguaaugaugga	7,44	10,44	0,71	1	0,382
SEQ ID NO: 469	469	hsa-miR-572	guccgcucggcggugggccca	6,78	4,44	1,53	1	0,384
SEQ ID NO: 470	470	hsa-miR-526a	cucuagagggaagcacuuucug	27	56,22	0,48	1	0,385
SEQ ID NO: 471	471	hsa-miR-936	acaguagagggaggaaucgcag	683,82	660,47	1,04	1	0,386
SEQ ID NO: 472	472	hsa-miR-548n	caaaaguaauugugguauuugu	1	1	1	1	0,386
SEQ ID NO: 473	473	hsa-miR-21	uagcuuaucagacugauguuga	708,06	857,3	0,83	1	0,387
SEQ ID NO: 474	474	hsa-miR-182*	ugguucuagacugugccaacua	1	1	1	1	0,387
SEQ ID NO: 475	475	hsa-miR-34c-5p	aggcaguguaguuagcugauugc	1	1	1	1	0,387
SEQ ID NO: 476	476	hsa-miR-429	uaauacugucugguaaaaccgu	1	1	1	1	0,387
SEQ ID NO: 477	477	hsa-miR-628-5p	augugacauauuuacuagagg	1	1	1	1	0,387

SEQ ID NO: 478	478	hsa-miR-29a*	acugauuucuuuugguucag	2,22	1	2,22	0,387
SEQ ID NO: 479	479	hsa-miR-370	gccugcuggggugGaaccuggu	194	156,56	1,24	0,387
SEQ ID NO: 480	480	hsa-let-7a*	cuauacaaucuacugucuuuc	4,78	4,22	1,13	0,387
SEQ ID NO: 481	481	hsa-miR-101*	caguuaucacagugcugaugcu	1	1	1	0,387
SEQ ID NO: 482	482	hsa-miR-659	uaaaguaaauaugcaccaaaa	1	1	1	0,387
SEQ ID NO: 483	483	hsa-miR-217	uacugcaucaggaacugauugga	1	1	1	0,389
SEQ ID NO: 484	484	hsa-miR-519b-5p	cucuagagggaagcgcuuucug	1,56	4,44	0,35	0,389
SEQ ID NO: 485	485	hsa-miR-30e*	cuuucagucggauguuuacagc	20,56	8,33	2,47	0,390
SEQ ID NO: 486	486	hsa-miR-147	guguguggaaaugcuucugc	4	1	4	0,394
SEQ ID NO: 487	487	hsa-miR-487b	aaucguacagggucaucacuu	20,56	12,11	1,7	0,394
SEQ ID NO: 488	488	hsa-miR-888*	gacugacaccucuuugggugaa	1	6,56	0,15	0,394
SEQ ID NO: 489	489	hsa-miR-205	uccuucauuccaccggagucug	1	1	1	0,395
SEQ ID NO: 490	490	hsa-miR-1257	agugaaugauggguucugacc	2,67	1,56	1,71	0,395
SEQ ID NO: 491	491	hsa-miR-7	uggaagacuagugauuuuguugu	256,44	1	256,44	0,396
SEQ ID NO: 492	492	hsa-miR-296-5p	agggccccccucaauccugu	48	58,89	0,82	0,397
SEQ ID NO: 493	493	hsa-miR-1255a	aggaugagcaaagaaaguagauu	46,44	28,44	1,63	0,399
SEQ ID NO: 494	494	hsa-miR-380*	ugguugaccauagaacaugcgc	1	1	1	0,399
SEQ ID NO: 495	495	hsa-miR-1275	guggggagaggcuguc	1146,69	901,96	1,27	0,399
SEQ ID NO: 496	496	hsa-miR-330-5p	ucucuggGccuguguucuaggc	1	1	1	0,399
SEQ ID NO: 497	497	hsa-miR-1243	aacuggaucaauuauaggagug	1	1	1	0,399
SEQ ID NO: 498	498	hsa-miR-136*	caucaucgucucaaaaugagucu	1	1	1	0,399
SEQ ID NO: 499	499	hsa-miR-141*	caucuuccaguacaguguugga	1	1	1	0,399
SEQ ID NO: 500	500	hsa-miR-517c	aucgugcaucccuuuuagagugu	1	1	1	0,399
SEQ ID NO: 501	501	hsa-miR-621	ggcuagcaacagcgcuuaccu	1	1	1	0,399
SEQ ID NO: 502	502	hsa-miR-1915*	accuugccuugcugccccggGcc	1	11,33	0,09	0,399
SEQ ID NO: 503	503	hsa-miR-541	uggugggcacagaaucuggacu	16,78	28,44	0,59	0,399
SEQ ID NO: 504	504	hsa-miR-543	aaacauucgcggugcacuucuu	1	1	1	0,399
SEQ ID NO: 505	505	hsa-miR-942	ucuucuguuuuggccaugug	52	18,11	2,87	0,400
SEQ ID NO: 506	506	hsa-miR-26a-1*	ccuauucuugguuacuugcacg	1	1	1	0,401
SEQ ID NO: 507	507	hsa-miR-567	aguauguucuccaggacagaac	1	1	1	0,401
SEQ ID NO: 508	508	hsa-miR-184	uggacggagaacugauaagggu	94,56	56,78	1,67	0,401
SEQ ID NO: 509	509	hsa-miR-376a	aucauagaggaaaauccacgu	1	3,11	0,32	0,402
SEQ ID NO: 510	510	hsa-miR-124*	cguguucacagcggaccuugau	2,67	1	2,67	0,403
SEQ ID NO: 511	511	hsa-miR-1254	agccuggaagcuggagccugcagu	245	723,61	0,34	0,405
SEQ ID NO: 512	512	hsa-miR-1207-5p	uggcagggaggcuggGagggg	5382,15	4318,58	1,25	0,405
SEQ ID NO: 513	513	hsa-miR-580	uugagaaugaugaaucauuagg	1	1	1	0,405
SEQ ID NO: 514	514	hsa-let-7b*	cuauacaaccuacugccuuccc	22,22	13,72	1,62	0,405

SEQ ID NO: 515	515	hsa-miR-539	ggagaaauuauccuuggugugu	1	1	1	1	1	0,407
SEQ ID NO: 516	516	hsa-miR-520a-3p	aaagugcuucccuuuggacugu	1	1	1	1	1	0,409
SEQ ID NO: 517	517	hsa-miR-585	ugggcguaucuguaugcua	1	1	1	1	1	0,409
SEQ ID NO: 518	518	hsa-miR-675b	cuguaugcccuccaccgcuca	4	4,44	0,9	1	1	0,409
SEQ ID NO: 519	519	hsa-miR-943	cugacuguugccguccuccag	1	1	1	1	1	0,409
SEQ ID NO: 520	520	hsa-miR-573	cugaagugauguguaacugaucag	1	1	1	1	1	0,409
SEQ ID NO: 521	521	hsa-miR-93	caaagugcuuucgugcagguag	4779,31	5660,31	0,84	1	1	0,409
SEQ ID NO: 522	522	hsa-miR-27a*	agggcuuagcugcuugugagca	1	1	1	1	1	0,413
SEQ ID NO: 523	523	hsa-miR-613	aggaauguuccuccuuugcc	1	1	1	1	1	0,413
SEQ ID NO: 524	524	hsa-miR-220c	acacagggcuguuugugaagacu	1	3,11	0,32	1	1	0,414
SEQ ID NO: 525	525	hsa-miR-524-3p	gaaggcgcuucccuuuggagu	1	1	1	1	1	0,416
SEQ ID NO: 526	526	hsa-miR-500	uaauccuugcuaccugggugaga	136,17	58,78	2,32	1	1	0,416
SEQ ID NO: 527	527	hsa-miR-1201	agccugauuaaaacacaugcucuga	37,89	18,11	2,09	1	1	0,416
SEQ ID NO: 528	528	hsa-miR-20a*	acugcauuaugagcacuuaaag	1	1	1	1	1	0,416
SEQ ID NO: 529	529	hsa-miR-1914*	ggagggucccgcacugggagg	249,39	153	1,63	1	1	0,418
SEQ ID NO: 530	530	hsa-miR-425*	aucgggaaugucguguccgccc	98	33,78	2,9	1	1	0,418
SEQ ID NO: 531	531	hsa-miR-515-3p	gagugccuucuuuuggagcguu	1	1	1	1	1	0,418
SEQ ID NO: 532	532	hsa-miR-377*	agaguugccuuguggugaauuc	1	1	1	1	1	0,418
SEQ ID NO: 533	533	hsa-miR-504	agacccuggucugcacucuauc	1	1	1	1	1	0,418
SEQ ID NO: 534	534	hsa-miR-548c-3p	caaaaaucucaauuacuuuugc	1	1	1	1	1	0,418
SEQ ID NO: 535	535	hsa-miR-1276	uaaagagcccuguggagaca	24,56	30,44	0,81	1	1	0,418
SEQ ID NO: 536	536	hsa-miR-138	agcuggugugugaaucaggccg	8,44	1	8,44	1	1	0,418
SEQ ID NO: 537	537	hsa-miR-431	ugucuugcaggccgucaugca	1	3,67	0,27	1	1	0,418
SEQ ID NO: 538	538	hsa-miR-494	ugaaacauacacgggaaaccuc	20349,58	20349,58	1	1	1	0,418
SEQ ID NO: 539	539	hsa-miR-448	uugcauauguaggaugucccau	1	1	1	1	1	0,418
SEQ ID NO: 540	540	hsa-miR-633	cuaauaguaucuaccacaauaaa	1	1	1	1	1	0,418
SEQ ID NO: 541	541	hsa-miR-487a	aaucauacagggacauccaguu	1,56	1,56	1	1	1	0,418
SEQ ID NO: 542	542	hsa-miR-149	ucuggcuccgugucuucacuccc	9,56	11,33	0,84	1	1	0,418
SEQ ID NO: 543	543	hsa-miR-300	uauacaagggcagacucucucu	1	1	1	1	1	0,418
SEQ ID NO: 544	544	hsa-miR-1826	auugaucaucgacacuucgaacgcaau	35853,42	35853,42	1	1	1	0,418
SEQ ID NO: 545	545	hsa-miR-127-3p	ucggauccgucugagcuuggcu	1	1	1	1	1	0,418
SEQ ID NO: 546	546	hsa-miR-486-5p	uccuguacugagcugccccgag	42197,28	42197,28	1	1	1	0,418
SEQ ID NO: 547	547	hsa-miR-148a	ucagugcacuacagaacuuugu	382	901,96	0,42	1	1	0,419
SEQ ID NO: 548	548	hsa-miR-1294	ugugaggugguggcauuguguguu	29,11	18,72	1,55	1	1	0,419
SEQ ID NO: 549	549	hsa-miR-548l	aaaaguauuugcggguuuuguc	1	1	1	1	1	0,422
SEQ ID NO: 550	550	hsa-miR-142-5p	cauaaaguagaaagcacuacu	29,11	10,44	2,79	1	1	0,424
SEQ ID NO: 551	551	hsa-miR-889	uuaauaucggacaaccauuugu	1	1	1	1	1	0,431

SEQ ID NO: 552	552	hsa-miR-365	uaaugcccuaaaaauccuuau	24	42,78	0,56	0,431
SEQ ID NO: 553	553	hsa-miR-99b	cacccguagaaccgaccuugcg	73,33	33,56	2,19	0,437
SEQ ID NO: 554	554	hsa-miR-200b*	caucuuacuggguagcaauugga	7,44	4,22	1,76	0,437
SEQ ID NO: 555	555	hsa-miR-200a	uaacacugucugguaacgaaugu	1	1	1	0,437
SEQ ID NO: 556	556	hsa-miR-518e	aaagcgcuucccuucagagug	1	1	1	0,437
SEQ ID NO: 557	557	hsa-miR-612	gcugggcagggcuucugagcuccuu	24,56	33,44	0,73	0,439
SEQ ID NO: 558	558	hsa-miR-183*	gugaauuaccgaagggccauaa	82,06	72,22	1,14	0,439
SEQ ID NO: 559	559	hsa-miR-148b	ucagugcaucacagaacuuugu	364,22	1	364,22	0,440
SEQ ID NO: 560	560	hsa-miR-103	agcagcauuguacagggcuauga	3868,5	5382,15	0,72	0,441
SEQ ID NO: 561	561	hsa-miR-548o	ccaaaacugcaguuacuuuugc	1	1	1	0,441
SEQ ID NO: 562	562	hsa-miR-1203	cccggagccaggaugcagcuc	43,11	28	1,54	0,441
SEQ ID NO: 563	563	hsa-miR-135a*	uauaggguuggagccguggcg	644,9	480,44	1,34	0,441
SEQ ID NO: 564	564	hsa-miR-383	agaucagaaggugauuguggcu	15,33	18,67	0,82	0,441
SEQ ID NO: 565	565	hsa-miR-1913	ucugcccccucccgcugcugcca	34,22	51,56	0,66	0,441
SEQ ID NO: 566	566	hsa-miR-373	gaagugcuucgauuuuggggugu	1	1,56	0,64	0,442
SEQ ID NO: 567	567	hsa-miR-371-5p	acucaaacugugggggcacu	98	93,22	1,05	0,444
SEQ ID NO: 568	568	hsa-miR-298	agcagaagcagggagguucuccca	71,56	53,33	1,34	0,446
SEQ ID NO: 569	569	hsa-miR-758	uuugugaccugguccacuaacc	9,11	14,89	0,61	0,446
SEQ ID NO: 570	570	hsa-miR-412	acuucaccugguccacuagccgu	4	1,56	2,57	0,446
SEQ ID NO: 571	571	hsa-miR-518c	caaagcgcuucucuuuagagugu	1	1	1	0,446
SEQ ID NO: 572	572	hsa-miR-589*	ucagaacaaaugccgguucccaga	22,67	20,56	1,1	0,446
SEQ ID NO: 573	573	hsa-miR-643	acuuguaugcuagucagguag	1	1	1	0,446
SEQ ID NO: 574	574	hsa-miR-592	uugucaauaugcgaugaugu	1	1	1	0,446
SEQ ID NO: 575	575	hsa-miR-892a	cacuguguccuuuucgcguag	7,89	14,89	0,53	0,446
SEQ ID NO: 576	576	hsa-miR-944	aaauuauuguacaucggaugag	1	1	1	0,447
SEQ ID NO: 577	577	hsa-miR-576-3p	aagauggugaaaaauggaauc	1	11,33	0,09	0,447
SEQ ID NO: 578	578	hsa-miR-581	ucuuguguucucuagaucagu	1	1	1	0,448
SEQ ID NO: 579	579	hsa-miR-625*	gacuauagaacuuucccccuca	52	21,89	2,38	0,451
SEQ ID NO: 580	580	hsa-miR-1260	aucccaccucugccacca	84,17	51,33	1,64	0,452
SEQ ID NO: 581	581	hsa-miR-1281	ucgccucccucccucccc	8,44	35,83	0,24	0,452
SEQ ID NO: 582	582	hsa-miR-337-5p	gaacggcuucauacaggagu	2,67	8,33	0,32	0,454
SEQ ID NO: 583	583	hsa-miR-133b	uuuggucccccuucaaccagcua	24	19,78	1,21	0,456
SEQ ID NO: 584	584	hsa-miR-92a-2*	ggguggggauuguuguugcauuac	148,44	67,44	2,2	0,456
SEQ ID NO: 585	585	hsa-miR-100*	caagcuuguaucuaaggguaug	1	1	1	0,459
SEQ ID NO: 586	586	hsa-miR-589	ugagaaccacgucugcucugag	6,78	1	6,78	0,464
SEQ ID NO: 587	587	hsa-miR-218	uugugcuugaucuaaccaugu	1	1	1	0,464
SEQ ID NO: 588	588	hsa-miR-224	caagucacuagugguuccguu	1	1	1	0,468

SEQ ID NO: 589	589	hsa-miR-16-2*	ccaauauuacugugcugcuuua	40,56	30,22	1,34	0,469
SEQ ID NO: 590	590	hsa-miR-301b	cagugcaaugauauugucaaagc	1	1	1	0,472
SEQ ID NO: 591	591	hsa-miR-190b	ugauauguuugauauuggguu	1	1	1	0,472
SEQ ID NO: 592	592	hsa-miR-375	uuuguucguucggcucgcguga	1	1	1	0,473
SEQ ID NO: 593	593	hsa-miR-548p	uagcaaaaaacugcaguuacuuu	1	1	1	0,474
SEQ ID NO: 594	594	hsa-miR-185*	aggggcuggcuuuccucuggguc	55,56	47,06	1,18	0,474
SEQ ID NO: 595	595	hsa-miR-519d	caaagugcccucccuuuagagug	1	1	1	0,477
SEQ ID NO: 596	596	hsa-miR-605	uaaaucccaugguccuucucccu	6,78	3,67	1,85	0,479
SEQ ID NO: 597	597	hsa-miR-877	guagaggagauggcgcaggg	364,22	450,61	0,81	0,481
SEQ ID NO: 598	598	hsa-miR-125a-3p	acaggugaggguucuggagcc	58,33	39,22	1,49	0,481
SEQ ID NO: 599	599	hsa-miR-744*	cuguugccacuaaccucaaccu	15,33	11,33	1,35	0,481
SEQ ID NO: 600	600	hsa-miR-520c-5p	cucuagagggaagcacuuucug	31,56	30,44	1,04	0,481
SEQ ID NO: 601	601	hsa-miR-148a*	aaaguucugagacaccucgacu	1	1	1	0,491
SEQ ID NO: 602	602	hsa-miR-212	uaacagucuccagucacgggcc	7,44	4,44	1,68	0,492
SEQ ID NO: 603	603	hsa-miR-505	cgucaacacuugcugguuuccu	53	11,33	4,68	0,492
SEQ ID NO: 604	604	hsa-miR-496	ugaguauuacaugccaaucuc	15,33	4,44	3,45	0,494
SEQ ID NO: 605	605	hsa-miR-1323	ucaaaacugaggggcauuuucu	88,22	44	1,55	0,497
SEQ ID NO: 606	606	hsa-miR-548e	aaaaacugagacuacuuuugca	1	1	1	0,497
SEQ ID NO: 607	607	hsa-miR-628-3p	ucuaguaagaguggcagucga	49,56	34,44	1,44	0,500
SEQ ID NO: 608	608	hsa-miR-1914	cccugugcccggcccacuucug	6,78	14,89	0,46	0,501
SEQ ID NO: 609	609	hsa-miR-584	uuaugguuugccuggacugag	119,89	114,67	1,05	0,503
SEQ ID NO: 610	610	hsa-miR-135b*	auguaggcuaaaagccauggg	34,22	12,11	2,83	0,505
SEQ ID NO: 611	611	hsa-miR-1295	uuaggccgcagaucuggguga	8,44	11,33	0,75	0,505
SEQ ID NO: 612	612	hsa-miR-95	uucaacgggguauuuauugagca	1	1	1	0,505
SEQ ID NO: 613	613	hsa-miR-133a	uuugguccccuucaaccagcug	34,22	21,11	1,62	0,505
SEQ ID NO: 614	614	hsa-miR-485-3p	gucauacacggcucuccucucu	1	1,56	0,64	0,507
SEQ ID NO: 615	615	hsa-miR-541*	aaaggauucugcugucgguccccacu	1	1	1	0,512
SEQ ID NO: 616	616	hsa-miR-374b	auauaauacaaccugcuaagug	126,44	21,56	5,87	0,512
SEQ ID NO: 617	617	hsa-miR-329	aacacaccugguuaaccucuuu	1	1,56	0,64	0,515
SEQ ID NO: 618	618	hsa-miR-483-5p	aagacgggaggaaagaagggag	4541,94	3572,67	1,27	0,515
SEQ ID NO: 619	619	hsa-miR-885-3p	aggcagcgggguguagugguuua	463,22	1040,44	0,45	0,516
SEQ ID NO: 620	620	hsa-let-7i*	cugcgcaagcuacugccuugcu	5,22	1	5,22	0,516
SEQ ID NO: 621	621	hsa-miR-935	ccaguuaccgcuuccgcuaccgc	1	1	1	0,516
SEQ ID NO: 622	622	hsa-miR-130b	cagugcaauguugaaaggggcau	388	185,22	2,09	0,523
SEQ ID NO: 623	623	hsa-miR-1274a	gucccuguucaggcgcca	93,89	12	7,82	0,523
SEQ ID NO: 624	624	hsa-miR-1226	ucaccagcccuguguucccuag	1	4,44	0,23	0,528
SEQ ID NO: 625	625	hsa-miR-518e*	cucuagagggaagcgcuuucug	2,22	2,67	0,83	0,530

SEQ ID NO: 626	626	hsa-miR-1225-3p	ugagccccugugccgccccag	39,67	42,78	0,93		0,530
SEQ ID NO: 627	627	hsa-miR-923	gucagcggagaaagaaacu	24783,94	20349,58	1,22		0,531
SEQ ID NO: 628	628	hsa-miR-196a*	cggcaacaagaaacugccugag	15,33	18,72	0,82		0,531
SEQ ID NO: 629	629	hsa-miR-1270	cuggagauauggaagagcugugu	31,56	30,44	1,04		0,532
SEQ ID NO: 630	630	hsa-miR-1271	cuuggcaccuagcaagcacuca	15,78	1,56	10,14		0,532
SEQ ID NO: 631	631	hsa-miR-610	ugagcuaaaugugugcuggga	24	36,11	0,66		0,532
SEQ ID NO: 632	632	hsa-miR-574-3p	cacgcucaugcacacacccaca	48	58,78	0,82		0,533
SEQ ID NO: 633	633	hsa-miR-1282	ucguuugccuuuuucugcuu	29,44	1,56	18,93		0,534
SEQ ID NO: 634	634	hsa-miR-10b*	acagauucgauucuagggggaau	1	1	1		0,534
SEQ ID NO: 635	635	hsa-miR-216a	uaaucucagcuggcaacuguga	1	1	1		0,534
SEQ ID NO: 636	636	hsa-miR-144*	ggauaucaucauauacuguaag	340,89	450,61	0,76		0,534
SEQ ID NO: 637	637	hsa-miR-23a*	gggguuccugggggaugggauuu	74	122,44	0,6		0,536
SEQ ID NO: 638	638	hsa-miR-499-5p	uuaagacuugcagugauguuu	1	1	1		0,540
SEQ ID NO: 639	639	hsa-miR-183	uauggcacugguagaauucacu	90,11	26,56	3,39		0,541
SEQ ID NO: 640	640	hsa-miR-490-3p	caaccuggaggacuccaugcug	1	1	1		0,546
SEQ ID NO: 641	641	hsa-miR-330-3p	gcaaagcacacggccugcagaga	15,33	11,11	1,38		0,548
SEQ ID NO: 642	642	hsa-let-7g*	cuguacaggccacugccuugc	1	1	1		0,548
SEQ ID NO: 643	643	hsa-miR-483-3p	ucacuccuccuccucccgucuu	13	30,44	0,43		0,551
SEQ ID NO: 644	644	hsa-miR-214	acagcaggcacagacaggcagu	29,11	3,11	9,36		0,555
SEQ ID NO: 645	645	hsa-miR-34b*	uaggcagugucauuagcugauug	1	1	1		0,555
SEQ ID NO: 646	646	hsa-miR-302d*	acuuuaacaugggaggcacuugc	1	11,33	0,09		0,558
SEQ ID NO: 647	647	hsa-miR-382	gaaguuucguggguggaauucg	9,56	1,56	6,14		0,561
SEQ ID NO: 648	648	hsa-miR-454*	acccuaucaauauugucucugc	27	21,11	1,28		0,561
SEQ ID NO: 649	649	hsa-miR-1202	gugccagcugcagugggggag	71,56	86,67	0,83		0,561
SEQ ID NO: 650	650	hsa-miR-202	agagguauagggcaugggaa	111,78	61,11	1,83		0,564
SEQ ID NO: 651	651	hsa-miR-544	auucugcauuuuuagcaaguuc	1	1	1		0,564
SEQ ID NO: 652	652	hsa-miR-593	ugucucugcugggguuucu	30,44	46,44	0,66		0,564
SEQ ID NO: 653	653	hsa-miR-760	cggcucugggucuguggggga	34,89	53,33	0,65		0,564
SEQ ID NO: 654	654	hsa-miR-940	aaggcagggcccccgcucccc	112,44	67,44	1,67		0,565
SEQ ID NO: 655	655	hsa-let-7e*	cuauacggccucCuagcuuucc	1	1	1		0,568
SEQ ID NO: 656	656	hsa-miR-1237	uccuucugcuccgucccccag	37,89	30,44	1,24		0,570
SEQ ID NO: 657	657	hsa-miR-18b*	ugcccuaaaugcccuucuggc	24,56	18,11	1,36		0,576
SEQ ID NO: 658	658	hsa-miR-630	aguauucuguaccagggaaggu	4	6,56	0,61		0,576
SEQ ID NO: 659	659	hsa-miR-519e*	uucuccaaaagggagcacuuuc	17,11	19,78	0,87		0,580
SEQ ID NO: 660	660	hsa-miR-452	aacuguuugcagaggaaacuga	2,67	1	2,67		0,581
SEQ ID NO: 661	661	hsa-miR-26b*	ccuguucuccauuacuuggcuc	1	4,22	0,24		0,581
SEQ ID NO: 662	662	hsa-miR-516b	aucuggagguaagaagcacuuu	52	56,22	0,92		0,581

SEQ ID NO: 663	663	hsa-miR-299-3p	uaugugggauggguaaaccgcuu	58,78	55,22	1,06		0,582
SEQ ID NO: 664	664	hsa-miR-381	uauacaagggcaagcucucugu	7,44	1	7,44		0,582
SEQ ID NO: 665	665	hsa-miR-340	uuauaaagcaaugagacugauu	79,67	21,56	3,7		0,582
SEQ ID NO: 666	666	hsa-miR-132	uaacagucuacagccauggucg	24,56	4,22	5,82		0,582
SEQ ID NO: 667	667	hsa-miR-142-3p	uguaguguuuccuacuuuaugga	1	1	1		0,582
SEQ ID NO: 668	668	hsa-miR-125b-1*	acggguuaggcucuugggagcu	49,56	56,22	0,88		0,587
SEQ ID NO: 669	669	hsa-miR-30c-2*	cugggagaaggcuguuuacucu	68,67	56,78	1,21		0,587
SEQ ID NO: 670	670	hsa-miR-627	gugagucucuaagaaaagagga	1	1	1		0,587
SEQ ID NO: 671	671	hsa-miR-1908	cggcgggacggcgauugguc	5944,79	6597,61	0,9		0,590
SEQ ID NO: 672	672	hsa-miR-1267	ccuguugaaguguaaucccca	9,56	1,56	6,14		0,590
SEQ ID NO: 673	673	hsa-miR-507	uuuugcaccuuuuggagugaa	1	1	1		0,590
SEQ ID NO: 674	674	hsa-miR-188-5p	cauccuugcaugguggaggg	21,44	22,22	0,97		0,593
SEQ ID NO: 675	675	hsa-miR-486-3p	cggggcagcucaguacaggau	37,89	18,72	2,02		0,593
SEQ ID NO: 676	676	hsa-miR-596	aagccugcccggcuccucggg	1	3,11	0,32		0,596
SEQ ID NO: 677	677	hsa-miR-193a-5p	ugggucuuugcgggcgagauga	46,89	30,44	1,54		0,600
SEQ ID NO: 678	678	hsa-miR-671-3p	uccgguucucagggcuccacc	21,11	13,72	1,54		0,602
SEQ ID NO: 679	679	hsa-miR-24-1*	ugccuacugagcugauaucagu	1	1	1		0,603
SEQ ID NO: 680	680	hsa-miR-19b-2*	aguuuugcagguuugcauuuca	1	1	1		0,609
SEQ ID NO: 681	681	hsa-miR-1308	gcaugggugguucagugg	15421,86	9312,5	1,66		0,612
SEQ ID NO: 682	682	hsa-miR-208a	auaagacgagcaaaaagcuugu	19,89	14,89	1,34		0,612
SEQ ID NO: 683	683	hsa-miR-135a	uauggcuuuuuauuccuauguga	1	1	1		0,614
SEQ ID NO: 684	684	hsa-miR-331-5p	cuaguaugguucccagggaucc	22,22	21,11	1,05		0,614
SEQ ID NO: 685	685	hsa-miR-181c	aacauucaaccugucggugagu	130,44	21,78	5,99		0,619
SEQ ID NO: 686	686	hsa-miR-640	augauccaggaaccugccucu	4	4,44	0,9		0,624
SEQ ID NO: 687	687	hsa-miR-1909	cgcaggggccgggugcucaccg	154,22	132,56	1,16		0,629
SEQ ID NO: 688	688	hsa-miR-629	uggguuuacguuggggagaacu	106,11	63,11	1,68		0,629
SEQ ID NO: 689	689	hsa-miR-10a	uacccuguagauccgaauuugug	34,22	30,44	1,12		0,629
SEQ ID NO: 690	690	hsa-miR-491-5p	agugggaacccuuccaugagg	101,11	96,94	1,04		0,629
SEQ ID NO: 691	691	hsa-miR-492	aggaccugcgggacaagauucuu	88,56	87,67	1,01		0,629
SEQ ID NO: 692	692	hsa-miR-516a-5p	uucucgaggaaaagaagcacuuuc	39,67	58,78	0,67		0,629
SEQ ID NO: 693	693	hsa-miR-510	uacucaggagaguggcaaucac	26,78	8,33	3,21		0,629
SEQ ID NO: 694	694	hsa-miR-1915	ccccagggcgacgcggcggg	2223,89	3080,08	0,72		0,629
SEQ ID NO: 695	695	hsa-miR-518c*	ucucuggagggaagcacuuucug	109,67	63,61	1,72		0,629
SEQ ID NO: 696	696	hsa-miR-1273	gggcgacaaagcaagacucuuucuu	26,44	31,33	0,84		0,629
SEQ ID NO: 697	697	hsa-miR-25*	aggcggagacuugggcaauug	111,78	68,44	1,63		0,629
SEQ ID NO: 698	698	hsa-miR-744	ugcgggggcuagggcuaacagca	364,22	388	0,94		0,629
SEQ ID NO: 699	699	hsa-miR-550	agugccugagggaguaagagccc	136,17	90,78	1,5		0,629

SEQ ID NO: 700	700	hsa-miR-890	uacuuggaaaggcaucaguug	20,56	11,56	1,78		0,631
SEQ ID NO: 701	701	hsa-miR-1303	uuuagagacgggggucuugcucu	41,89	31,33	1,34		0,632
SEQ ID NO: 702	702	hsa-miR-650	aggaggcagcgcucucaggac	14,89	12,44	1,2		0,632
SEQ ID NO: 703	703	hsa-miR-1227	cgugccacccuuuuccccag	32	29,94	1,07		0,632
SEQ ID NO: 704	704	hsa-miR-595	gaaguugccguggugucu	12	11,33	1,06		0,632
SEQ ID NO: 705	705	hsa-miR-1255b	cggaugagcaaagaaagugguu	87,67	76,56	1,15		0,632
SEQ ID NO: 706	706	hsa-miR-1252	agaaggaaauugaauucauuua	1	1	1		0,632
SEQ ID NO: 707	707	hsa-miR-455-3p	gcaguccaugggcauauacac	1	1	1		0,634
SEQ ID NO: 708	708	hsa-miR-345	gcugacuccuagucagggcuc	168,11	34,44	4,88		0,634
SEQ ID NO: 709	709	hsa-miR-96	uuuggcacuagcacauuuuugcu	106,89	36,11	2,96		0,634
SEQ ID NO: 710	710	hsa-miR-1321	cagggaggugaaugugau	74,22	58,78	1,26		0,635
SEQ ID NO: 711	711	hsa-miR-513c	uucucaaggaggugucguuuau	68,67	45,11	1,52		0,636
SEQ ID NO: 712	712	hsa-miR-548c-5p	aaaaguaauugcgguuuuugcc	1	1	1		0,639
SEQ ID NO: 713	713	hsa-miR-663	aggcgggggcgccgcgggaccgc	715,83	1175,03	0,61		0,642
SEQ ID NO: 714	714	hsa-miR-320c	aaaagcuggguugagagggu	5382,15	6141,96	0,88		0,644
SEQ ID NO: 715	715	hsa-miR-320b	aaaagcuggguugagagggcaa	6349,31	6349,31	1		0,644
SEQ ID NO: 716	716	hsa-miR-654-5p	ugguggccgcagaacaugugc	124,11	98,56	1,26		0,646
SEQ ID NO: 717	717	hsa-miR-326	ccucuggccuccuccuccag	20,56	19,78	1,04		0,646
SEQ ID NO: 718	718	hsa-miR-1825	uccagugccccucucucc	21,11	30,44	0,69		0,646
SEQ ID NO: 719	719	hsa-miR-328	cuggcccucucugcccuuccgu	72,22	68,44	1,06		0,649
SEQ ID NO: 720	720	hsa-miR-146b-5p	ugagaacugaauuccauaggcu	92,56	67,44	1,37		0,649
SEQ ID NO: 721	721	hsa-miR-886-3p	cgcgguguuacugacccuu	12,33	1	12,33		0,660
SEQ ID NO: 722	722	hsa-miR-1909*	ugagugccggugccugccug	20,56	16,33	1,26		0,665
SEQ ID NO: 723	723	hsa-miR-1469	cucggcgcgggcgcgggcucc	961,58	1297,51	0,74		0,670
SEQ ID NO: 724	724	hsa-miR-338-3p	uccagcaucagugauuuuguug	13,72	1	13,72		0,672
SEQ ID NO: 725	725	hsa-miR-886-5p	cgggucggaguuagcucaagcgg	126,44	87,67	1,44		0,679
SEQ ID NO: 726	726	hsa-miR-601	uggucuaggauuguuggaggag	20,56	21,89	0,94		0,679
SEQ ID NO: 727	727	hsa-miR-1298	uucauucggcuguccagaugua	1	1	1		0,680
SEQ ID NO: 728	728	hsa-miR-1910	ccaguccugugccugccgccu	7,44	11,56	0,64		0,681
SEQ ID NO: 729	729	hsa-miR-1226*	gugagggcaugcaggccuggaugggg	99,11	96,94	1,02		0,688
SEQ ID NO: 730	730	hsa-miR-421	aucaacagacauuaauugggcgc	217,67	1	217,67		0,693
SEQ ID NO: 731	731	hsa-miR-1471	gcccgcguguggagccaggugu	37,89	33,78	1,12		0,695
SEQ ID NO: 732	732	hsa-miR-150*	cuguacaggccuggggacag	101,11	101,78	0,99		0,700
SEQ ID NO: 733	733	hsa-miR-1229	cucucaccacugcccucccacag	27,89	33,78	0,83		0,700
SEQ ID NO: 734	734	hsa-miR-17*	acugcagugaaggcacuuguag	194	90,78	2,14		0,703
SEQ ID NO: 735	735	hsa-miR-320d	aaaagcuggguugagagga	4318,58	4390,58	0,98		0,703
SEQ ID NO: 736	736	hsa-miR-10b	uacccuguagaaccgaauuugug	22,22	8,33	2,67		0,706

SEQ ID NO: 737	737	hsa-miR-766	acuccagccccacagccucagc	106,11	70,89	1,5		0,717
SEQ ID NO: 738	738	hsa-miR-600	acuuacagacaagagccuugcuc	1	1	1		0,724
SEQ ID NO: 739	739	hsa-miR-641	aaagacauaggauagagucaccuc	34	21,56	1,58		0,729
SEQ ID NO: 740	740	hsa-miR-340*	uccgucucaguuacuuuauagc	4	1	4		0,730
SEQ ID NO: 741	741	hsa-miR-616*	acucaaaaccccuucagugacuu	1	1,56	0,64		0,730
SEQ ID NO: 742	742	hsa-miR-520a-5p	cuccagagggaaguacuuucu	15,33	18,72	0,82		0,734
SEQ ID NO: 743	743	hsa-miR-1179	aagcauucuuucauugguugg	1	1	1		0,734
SEQ ID NO: 744	744	hsa-miR-1178	uugcucacuguucuucccuag	1	1	1		0,734
SEQ ID NO: 745	745	hsa-miR-30b*	cugggagguggauguuuacuuc	88,56	98,56	0,9		0,735
SEQ ID NO: 746	746	hsa-miR-155*	cuccuacauauuagcauuaaca	1	1	1		0,735
SEQ ID NO: 747	747	hsa-miR-138-1*	ggcuacuucacaacaccagggcc	19,89	4,22	4,71		0,737
SEQ ID NO: 748	748	hsa-miR-501-5p	aauccuuugucccugggugaga	4,78	3,11	1,54		0,737
SEQ ID NO: 749	749	hsa-miR-191	caacggaaucccaaaagcagcug	31577,57	27467,24	1,15		0,740
SEQ ID NO: 750	750	hsa-miR-107	agcagcauuguacagggcuauca	4106,11	4915,83	0,84		0,743
SEQ ID NO: 751	751	hsa-miR-639	aucgcugcggcgagcgcugu	1	1	1		0,743
SEQ ID NO: 752	752	hsa-miR-518d-3p	caaagcgcuucccuuuggagc	1	1	1		0,747
SEQ ID NO: 753	753	hsa-miR-106b	uaaagugcugacagugcagau	3080,08	2319,9	1,33		0,747
SEQ ID NO: 754	754	hsa-miR-129-3p	aagcccuuaccccaaaaagcau	4	28,33	0,14		0,748
SEQ ID NO: 755	755	hsa-miR-1306	acguuggcucuggugg	6,78	4,22	1,61		0,748
SEQ ID NO: 756	756	hsa-miR-187*	ggcuacaacacaggacccgggc	88,56	68,44	1,29		0,754
SEQ ID NO: 757	757	hsa-miR-125b	ucccugagacccuaacuuguga	65,56	38,33	1,71		0,763
SEQ ID NO: 758	758	hsa-miR-642	gucccucccaaaaugugcucug	1	1	1		0,768
SEQ ID NO: 759	759	hsa-miR-30a*	cuuucagucggauguuugcagc	1	1	1		0,768
SEQ ID NO: 760	760	hsa-miR-139-5p	ucuacagugcacgugucuccag	1,56	4,22	0,37		0,768
SEQ ID NO: 761	761	hsa-miR-1307	acucggcgugggcgucggugug	82,06	70,67	1,16		0,772
SEQ ID NO: 762	762	hsa-miR-769-3p	cugggaucuccggggucuugguu	25,56	15,56	1,64		0,772
SEQ ID NO: 763	763	hsa-miR-532-5p	caugccuugaguguaggaccgu	121,44	92,56	1,31		0,776
SEQ ID NO: 764	764	hsa-miR-7-1*	caacaaaucacagucugccaua	15,78	28,33	0,56		0,779
SEQ ID NO: 765	765	hsa-miR-196a	uagguaguuucauguuguuggg	4	1	4		0,781
SEQ ID NO: 766	766	hsa-miR-1296	uuagggcccuggcucauccucc	14,56	4,22	3,45		0,782
SEQ ID NO: 767	767	hsa-miR-191*	gcugcgcuuggauuucgucccc	53	47,06	1,13		0,786
SEQ ID NO: 768	768	hsa-miR-221	agcuacauugucugcugggguuuc	382	539,56	0,71		0,788
SEQ ID NO: 769	769	hsa-miR-92a-1*	agguugggaucgguugcaaugcu	20,56	21,56	0,95		0,792
SEQ ID NO: 770	770	hsa-miR-1285	ucugggcaacaaagugagaccu	300,67	53	5,67		0,798
SEQ ID NO: 771	771	hsa-miR-518f*	cucuagagggaagcacuuucuc	25,17	58,89	0,43		0,798
SEQ ID NO: 772	772	hsa-miR-1233	ugagcccuguccucccgcag	8,44	12,44	0,68		0,798
SEQ ID NO: 773	773	hsa-miR-1290	uggauuuuggaucaggga	39,67	28,33	1,4		0,798

SEQ ID NO: 774	774	hsa-miR-598	uacgucaucguugucaucguca	12,22	1	12,22		0,802
SEQ ID NO: 775	775	hsa-miR-769-5p	ugagaccucuggguucugagcu	15,33	3,67	4,18		0,802
SEQ ID NO: 776	776	hsa-miR-614	gaacgccugucucugccaggugg	9,11	4,22	2,16		0,802
SEQ ID NO: 777	777	hsa-miR-578	cuucuugugcucuaggauugu	1	1	1		0,802
SEQ ID NO: 778	778	hsa-miR-1301	uugcagcugccugggagugacuuc	22,67	18,11	1,25		0,804
SEQ ID NO: 779	779	hsa-miR-515-5p	ucucuccaaaagaaagcacuuucug	1	1	1		0,809
SEQ ID NO: 780	780	hsa-miR-564	aggcacggugucagcaggc	56,78	47,06	1,21		0,814
SEQ ID NO: 781	781	hsa-miR-634	aaccagcacccaacuuuggac	36,78	49,22	0,75		0,815
SEQ ID NO: 782	782	hsa-miR-518b	caaagcgcucccccuuuagaggu	20,56	4,44	4,63		0,815
SEQ ID NO: 783	783	hsa-miR-941	cacccggcugugugcacaugugc	39,67	4,22	9,39		0,823
SEQ ID NO: 784	784	hsa-miR-376c	aacauagaggaaauuccacgu	1	1	1		0,828
SEQ ID NO: 785	785	hsa-miR-195*	ccaauauuggcugugcugcucc	1	1	1		0,828
SEQ ID NO: 786	786	hsa-miR-518a-5p	cugcaaagggaagcccuuuc	55,33	34	1,63		0,829
SEQ ID NO: 787	787	hsa-miR-557	guuugcacgggugggccuugucu	114,67	132	0,87		0,833
SEQ ID NO: 788	788	hsa-miR-1228*	gugggcgggggcagguguugug	5944,79	5802,55	1,02		0,833
SEQ ID NO: 789	789	hsa-miR-22*	aguucuucaguggcaagcuuua	69,67	36,11	1,93		0,833
SEQ ID NO: 790	790	hsa-miR-1234	ucggccugaccacccaccccac	53,67	82,06	0,65		0,833
SEQ ID NO: 791	791	hsa-miR-149*	agggagggacgggggcugugc	18004,17	13307,74	1,35		0,837
SEQ ID NO: 792	792	hsa-miR-30c-1*	cugggagaggguguuuacucc	101,11	101,11	1		0,837
SEQ ID NO: 793	793	hsa-miR-200c*	cgucuuacccagcaguguuugg	1	1	1		0,837
SEQ ID NO: 794	794	hsa-miR-1181	ccgucgccgccacccgagccg	21,11	28	0,75		0,837
SEQ ID NO: 795	795	hsa-miR-323-5p	aggugguccgugggcgcguucgc	58,33	67,44	0,86		0,840
SEQ ID NO: 796	796	hsa-miR-1231	gugucuggggcggacagcugc	43,11	30,44	1,42		0,840
SEQ ID NO: 797	797	hsa-miR-203	gugaaauguuuaggaccacuag	1	1	1		0,842
SEQ ID NO: 798	798	hsa-miR-302c*	uuuaacaugggguaccugcug	68,67	18,72	3,67		0,842
SEQ ID NO: 799	799	hsa-miR-99a	aacccguagauccgaucuugug	92,56	22,22	4,17		0,842
SEQ ID NO: 800	800	hsa-miR-146a	ugagaacugaauuccauggguu	136,17	129,44	1,05		0,842
SEQ ID NO: 801	801	hsa-miR-656	aauauuauacagucaaccucu	1	1	1		0,842
SEQ ID NO: 802	802	hsa-miR-526b*	gaaagugcuucccuuuagaggc	1	1	1		0,843
SEQ ID NO: 803	803	hsa-miR-148b*	aaguucuguuauacacucaggc	1	1	1		0,844
SEQ ID NO: 804	804	hsa-miR-181a	aacauucaacgcugucggugagu	586,78	133,11	4,41		0,848
SEQ ID NO: 805	805	hsa-miR-622	acagucugcugagguuggagc	6,78	3,11	2,18		0,853
SEQ ID NO: 806	806	hsa-miR-125a-5p	ucccugagacccuuuaaccuguga	82,89	21,56	3,85		0,853
SEQ ID NO: 807	807	hsa-miR-152	ucagugcaugacagaacuugg	16,78	12,11	1,39		0,859
SEQ ID NO: 808	808	hsa-miR-197	uucaccaccuucuccacccagc	143,78	111,78	1,29		0,859
SEQ ID NO: 809	809	hsa-miR-27b	uucacaguggcuaaguucugc	73,33	33,78	2,17		0,865
SEQ ID NO: 810	810	hsa-miR-1236	ccucuucccuguucucuccag	39,67	44	0,9		0,865

SEQ ID NO: 811	811	hsa-miR-495	aaacaaacauggugcacuucuu	2,67	3,67	0,73	0,868
SEQ ID NO: 812	812	hsa-miR-143	ugagaugaagcacuguagcuc	20,56	12	1,71	0,869
SEQ ID NO: 813	813	hsa-miR-362-3p	aacacaccuauucaaggauuca	16,44	14,89	1,1	0,878
SEQ ID NO: 814	814	hsa-miR-675	uggugcggagagggcccacagug	185,22	172,44	1,07	0,878
SEQ ID NO: 815	815	hsa-miR-1274b	uccguuucgggcgcca	176,56	63,61	2,78	0,884
SEQ ID NO: 816	816	hsa-miR-139-3p	ggagacgcggcccuguuggagu	43,11	33,78	1,28	0,886
SEQ ID NO: 817	817	hsa-miR-130b*	acucuuucccuguugcacuac	2,67	1	2,67	0,886
SEQ ID NO: 818	818	hsa-miR-1228	ucacaccugccucgcccccc	39,67	140,78	0,28	0,889
SEQ ID NO: 819	819	hsa-miR-1180	uuuccggcucgcguggguugu	61,11	21,11	2,89	0,894
SEQ ID NO: 820	820	hsa-miR-575	gagccaguuggacaggagc	58,78	70,67	0,83	0,894
SEQ ID NO: 821	821	hsa-miR-134	ugugacugguugaccagaggg	55,67	34	1,64	0,894
SEQ ID NO: 822	822	hsa-miR-875-3p	ccuggaaacacugagguugug	6,78	1	6,78	0,894
SEQ ID NO: 823	823	hsa-miR-92b*	agggacgggacgcggugcagug	1344,42	2425,74	0,55	0,895
SEQ ID NO: 824	824	hsa-miR-660	uacccauugcauaucggaguug	130,44	57	2,29	0,899
SEQ ID NO: 825	825	hsa-miR-526b	cucuugagggaagcacuuucugu	67,78	33,78	2,01	0,899
SEQ ID NO: 826	826	hsa-miR-422a	acuggacuuagggucagaaggc	166,44	1	166,44	0,900
SEQ ID NO: 827	827	hsa-miR-1250	acggugcuggauguggccuuu	37,67	40,78	0,92	0,901
SEQ ID NO: 828	828	hsa-miR-938	ugcccuuaaaggugaacccagu	2,22	1	2,22	0,905
SEQ ID NO: 829	829	hsa-miR-608	agggugguguuugggacagcuccgu	106,89	96,94	1,1	0,908
SEQ ID NO: 830	830	hsa-miR-1279	ucauauugcucuuuucu	1	1	1	0,908
SEQ ID NO: 831	831	hsa-miR-1249	acgcccuucccccccuucuuca	24,56	30,22	0,81	0,908
SEQ ID NO: 832	832	hsa-miR-661	ugccugggucucuggccugcgcgu	4	1	4	0,922
SEQ ID NO: 833	833	hsa-miR-1208	ucacuguucagacaggcgga	27	18,72	1,44	0,922
SEQ ID NO: 834	834	hsa-miR-130a	cagugcaauguuaaaagggcau	746,29	874,97	0,85	0,925
SEQ ID NO: 835	835	hsa-miR-450b-5p	uuuugcaauauguuccugaaua	1	1	1	0,925
SEQ ID NO: 836	836	hsa-miR-432	ucuuggaguaggucauugggugg	41,89	39,22	1,07	0,927
SEQ ID NO: 837	837	hsa-miR-409-3p	gaauguugcucggugaacccu	97,33	68,44	1,42	0,930
SEQ ID NO: 838	838	hsa-miR-527	cugcaaagggaagcccuuuc	74,78	68,44	1,09	0,941
SEQ ID NO: 839	839	hsa-miR-877*	uccucuucccucccucccag	20,83	21,11	0,99	0,947
SEQ ID NO: 840	840	hsa-miR-1238	cuucccucgucugucugcccc	52	58,89	0,88	0,954
SEQ ID NO: 841	841	hsa-miR-517*	ccucuagauggaagcacugucu	16,78	12,11	1,39	0,961
SEQ ID NO: 842	842	hsa-miR-193b*	cgggguuuugagggcgagauga	81,11	108,56	0,75	0,966
SEQ ID NO: 843	843	hsa-miR-524-5p	cuacaaagggaagcacuuucuc	31,11	29,44	1,06	0,967
SEQ ID NO: 844	844	hsa-miR-1258	aguuaggauuaggucgugga	15,78	12,44	1,27	0,967
SEQ ID NO: 845	845	hsa-miR-154	uagguuauccguguugccuucg	1	1	1	0,970
SEQ ID NO: 846	846	hsa-miR-637	acuggggcuuucgggcucugcgu	90,11	70,89	1,27	0,972
SEQ ID NO: 847	847	hsa-miR-588	uuggccacauggguuagaac	1,56	1,56	1	0,976

SEQ ID NO: 848	848	hsa-miR-155	uuaaugcuaaucgugauaaggggu	128,44	14,89	8,63	0,983
SEQ ID NO: 849	849	hsa-miR-664*	acuggcuagggaaaaugauuggau	61,56	39,44	1,56	0,988
SEQ ID NO: 850	850	hsa-miR-1470	gcccuccgcccgugcacccg	20,56	12,11	1,7	0,988
SEQ ID NO: 851	851	hsa-miR-105*	acggauguuugagcaugugcua	2,67	1	2,67	0,988
SEQ ID NO: 852	852	hsa-miR-324-5p	cgcauccccuagggcauuggugu	232,67	56,22	4,14	0,994
SEQ ID NO: 853	853	hsa-miR-129*	aagcccuuaccccaaaaaguau	8,44	1	8,44	0,994
SEQ ID NO: 854	854	hsa-miR-625	agggggaaaguucuauagucc	182,44	109,67	1,66	0,994
SEQ ID NO: 855	855	hsa-miR-519a*	cucuagagggaagcgcuuucug	1	4,44	0,23	0,994
SEQ ID NO: 856	856	hsa-miR-181a-2*	accacugaccguugacuguacc	115,33	67,44	1,71	0,994
SEQ ID NO: 857	857	hsa-miR-199b-5p	cccaguuuuagacuaucuguuc	4	1	4	0,994
SEQ ID NO: 858	858	hsa-miR-27a	uucacaguggcuaaguucgc	150,56	55,22	2,73	0,994
SEQ ID NO: 859	859	hsa-miR-518a-3p	gaaagcgcuucccuuugcugga	1	1	1	0,994
SEQ ID NO: 860	860	hsa-miR-1265	caggauguggucaaguguuguu	6,78	1,56	4,36	0,994
SEQ ID NO: 861	861	hsa-miR-92a	uauugcacuugucccggccugu	22685,5	18004,17	1,26	0,995
SEQ ID NO: 862	862	hsa-miR-29b-1*	gcugguuucauauggugguuuaga	1	1	1	0,995
SEQ ID NO: 863	863	hsa-miR-150	ucucccaacccuuguaccagug	600,34	839,63	0,72	0,996
SEQ ID NO: 864	864	hsa-miR-335	ucaagagcaauaacgaaaaaugu	115,33	67,44	1,71	0,997
SEQ ID NO: 865	865	hsa-miR-638	agggaucgcgggcggguggcggccu	4915,83	5944,79	0,83	0,999

Figure 11A

SEQ ID NO:	microRNA	Sequence	median g1	median g2	Q median	Log2 median	ttest.rawp	ttest.adjp	AUC	limma.rawp	limma.adjp
SEQ ID NO: 526	hsa-miR-500	uaauccuugcuaccugggugaga	213	445	0,478	-0,739	2,02E-03	5,62E-02	0,294	1,13E-03	4,89E-02
SEQ ID NO: 735	hsa-miR-320d	aaaagcuggguugagagga	908	466	1,947	0,666	4,44E-05	1,28E-02	0,694	8,05E-04	4,13E-02
SEQ ID NO: 699	hsa-miR-550	agugccugagggaguaagagccc	114	169	0,673	-0,396	1,55E-04	1,67E-02	0,260	2,93E-03	8,24E-02
SEQ ID NO: 714	hsa-miR-320c	aaaagcuggguugagagggu	783	466	1,679	0,518	3,07E-04	2,25E-02	0,677	1,40E-03	5,26E-02
SEQ ID NO: 623	hsa-miR-1274a	gucccuguucaggcgcca	142	275	0,518	-0,659	1,08E-03	4,24E-02	0,295	3,78E-03	8,58E-02
SEQ ID NO: 565	hsa-miR-1913	ucugccccccuccgcugcugcca	359	258	1,391	0,330	1,79E-03	5,62E-02	0,649	2,62E-02	2,15E-01
SEQ ID NO: 780	hsa-miR-564	aggcacgggugucagcaggc	157	126	1,246	0,220	3,92E-03	6,27E-02	0,638	7,28E-02	3,48E-01
SEQ ID NO: 815	hsa-miR-1274b	ucccuguucgggcgcca	770	1244	0,619	-0,460	6,78E-03	8,73E-02	0,338	2,05E-02	1,86E-01
SEQ ID NO: 544	hsa-miR-1826	auugaucaucgacacuucgaacgcaau	195	139	1,406	0,341	7,29E-03	8,80E-02	0,670	1,97E-01	5,35E-01
SEQ ID NO: 74	hsa-let-7d*	cuauacgaccugcugccuuucu	59	166	0,353	-1,042	7,04E-04	3,51E-02	0,264	6,30E-04	4,13E-02
SEQ ID NO: 854	hsa-miR-625	agggggaaaguucuauagucc	59	165	0,356	-1,032	8,59E-04	3,90E-02	0,289	4,32E-03	9,10E-02
SEQ ID NO: 134	hsa-miR-378*	cuccugacuccaggucccugugu	51	123	0,417	-0,876	7,84E-03	9,14E-02	0,365	2,16E-01	5,64E-01
SEQ ID NO: 558	hsa-miR-183*	gugaauuaccgaagggccauaa	85	146	0,577	-0,549	1,25E-04	1,54E-02	0,233	7,70E-04	4,13E-02
SEQ ID NO: 430	hsa-miR-21*	caacaccagucgaugggcugu	102	79	1,300	0,263	4,45E-04	2,40E-02	0,690	2,83E-02	2,24E-01
SEQ ID NO: 597	hsa-miR-877	guagaggagauggcgcaggg	60	102	0,587	-0,532	2,50E-03	5,64E-02	0,299	5,71E-03	9,77E-02
SEQ ID NO: 22	hsa-miR-1283	ucuacaaaggaaagcgcuuucu	109	71	1,548	0,437	2,68E-03	5,64E-02	0,685	3,02E-04	2,74E-02
SEQ ID NO: 303	hsa-miR-1286	ugcaggaccaagaugagcccu	120	92	1,296	0,259	2,81E-03	5,64E-02	0,661	3,13E-01	6,60E-01
SEQ ID NO: 771	hsa-miR-518f*	cucuagagggaagcacuuucuc	123	83	1,476	0,390	3,78E-03	6,19E-02	0,671	8,61E-04	4,13E-02
SEQ ID NO: 454	hsa-miR-659	cuugguucagggagggucccca	65	109	0,597	-0,515	5,40E-03	8,02E-02	0,320	3,35E-02	2,43E-01
SEQ ID NO: 81	hsa-miR-922	gcagcagagaauaggacuacguc	126	83	1,521	0,419	5,58E-03	8,02E-02	0,629	1,42E-02	1,61E-01
SEQ ID NO: 202	hsa-miR-508-5p	uacuccagagggcgucacucaug	114	94	1,207	0,188	6,26E-03	8,58E-02	0,631	6,29E-03	1,01E-01
SEQ ID NO: 474	hsa-miR-182*	ugguucuagacuugccaacua	47	20	2,311	0,838	8,53E-05	1,28E-02	0,723	1,64E-03	5,42E-02
SEQ ID NO: 42	hsa-miR-29c*	ugaccgauuucuccugguguuc	1	24	0,052	-2,955	1,61E-03	5,57E-02	0,361	2,68E-02	2,18E-01
SEQ ID NO: 505	hsa-miR-942	ucuucucuguuuuggccaugug	16	73	0,219	-1,520	1,85E-03	5,62E-02	0,305	5,64E-03	9,77E-02
SEQ ID NO: 368	hsa-miR-767-3p	ucugcucauaccccaugguuucu	44	18	2,502	0,917	2,60E-03	5,64E-02	0,683	1,97E-02	1,83E-01
SEQ ID NO: 110	hsa-miR-1256	aggcauugacuucucacuagcu	67	26	2,582	0,949	2,72E-03	5,64E-02	0,678	3,29E-04	2,74E-02
SEQ ID NO: 366	hsa-miR-369-5p	agaucgaccguguuauauucgc	31	14	2,160	0,770	3,55E-03	6,12E-02	0,628	1,79E-01	5,15E-01
SEQ ID NO: 718	hsa-miR-1825	uccagugcccuccucucc	46	93	0,498	-0,698	3,67E-03	6,19E-02	0,300	1,39E-02	1,61E-01
SEQ ID NO: 659	hsa-miR-519e*	uucuccaaaagggagcacuuuc	60	20	2,981	1,092	4,73E-03	7,29E-02	0,711	5,65E-05	9,76E-03
SEQ ID NO: 377	hsa-miR-1206	uguucauguagauguuuaagc	59	22	2,616	0,962	5,72E-03	8,10E-02	0,674	3,09E-03	8,24E-02
SEQ ID NO: 643	hsa-miR-483-3p	ucacuccucuccucccgucuu	21	51	0,415	-0,879	7,35E-03	8,80E-02	0,344	2,48E-02	2,12E-01

SEQ ID NO: 171	hsa-miR-214*	ugccugucuacacuugcugugc	58	34	1,736	0,551	3,90E-05	1,28E-02	0,744	4,99E-05	9,76E-03
SEQ ID NO: 701	hsa-miR-1303	uuuagagacggggucuugcucu	29	56	0,522	-0,650	3,51E-04	2,25E-02	0,258	8,27E-04	4,13E-02
SEQ ID NO: 181	hsa-miR-891b	ugcaacuuaccugagucauuga	95	68	1,409	0,343	7,32E-04	3,51E-02	0,693	3,25E-03	8,24E-02
SEQ ID NO: 485	hsa-miR-30e*	cuuucagucggauguuuacagc	39	63	0,621	-0,476	9,23E-04	3,98E-02	0,290	1,70E-03	5,42E-02
SEQ ID NO: 746	hsa-miR-155*	cuccuacauauuagcauuaaca	59	39	1,490	0,399	1,49E-03	5,36E-02	0,677	1,79E-02	1,80E-01
SEQ ID NO: 39	hsa-miR-668	ugucacucggcucggcccacuac	38	59	0,647	-0,436	1,93E-03	5,62E-02	0,280	1,35E-03	5,26E-02
SEQ ID NO: 624	hsa-miR-1226	ucaccagcccuguguucccuag	49	85	0,584	-0,538	1,70E-03	5,62E-02	0,261	1,90E-02	1,80E-01
SEQ ID NO: 108	hsa-miR-34a*	caaucagcaaguauacugcccu	90	68	1,327	0,283	2,35E-03	5,64E-02	0,687	3,75E-03	8,58E-02
SEQ ID NO: 149	hsa-miR-647	guggcugcacucacuuccuuc	68	41	1,673	0,515	2,78E-03	5,64E-02	0,704	4,91E-06	2,12E-03
SEQ ID NO: 631	hsa-miR-610	ugagcuaaaaugugugcuggga	50	33	1,521	0,419	3,03E-03	5,73E-02	0,640	8,59E-02	3,80E-01
SEQ ID NO: 499	hsa-miR-141*	caucuuccaguacaguguugga	68	68	1,288	0,253	4,10E-03	6,43E-02	0,690	3,49E-04	2,74E-02
SEQ ID NO: 79	hsa-miR-297	auguaugugugcaugugcaug	50	74	0,682	-0,382	5,52E-03	8,02E-02	0,295	8,24E-03	1,23E-01
SEQ ID NO: 621	hsa-miR-935	ccaguuaccgcuuccgcuaccgc	29	15	1,872	0,627	5,95E-03	8,28E-02	0,627	9,63E-02	3,90E-01
SEQ ID NO: 431	hsa-miR-657	ggcagguucucacccucucuagg	59	37	1,570	0,451	6,77E-03	8,73E-02	0,660	7,04E-02	3,43E-01
SEQ ID NO: 279	hsa-miR-548a-3p	caaaacuggcaauuacuuuugc	70	60	1,151	0,140	6,58E-03	8,73E-02	0,615	1,63E-01	4,96E-01
SEQ ID NO: 459	hsa-miR-802	caguaacaaagauucauccuugu	60	39	1,544	0,434	7,24E-03	8,80E-02	0,647	7,96E-02	3,65E-01
SEQ ID NO: 185	hsa-miR-208b	auaagacgaacaaaagguuugu	60	33	1,830	0,604	7,26E-03	8,80E-02	0,687	5,73E-03	9,77E-02
SEQ ID NO: 188	hsa-miR-146b-3p	ugcccuguggacucaguucugg	55	34	1,611	0,477	8,01E-03	9,22E-02	0,656	1,12E-02	1,45E-01
SEQ ID NO: 75	hsa-miR-199a-5p	cccaguguucagacuaccuguuc	236	573	0,411	-0,889	5,30E-06	4,57E-03	0,188	2,45E-07	2,12E-04
SEQ ID NO: 806	hsa-miR-125a-5p	ucccugagacccuuuaaccuguga	151	418	0,362	-1,017	3,65E-04	2,25E-02	0,277	2,87E-04	2,74E-02
SEQ ID NO: 622	hsa-miR-130b	cagugcaaugaugaaagggcau	1463	946	1,547	0,436	1,78E-04	1,70E-02	0,708	1,33E-02	1,61E-01
SEQ ID NO: 26	hsa-miR-423-3p	agccuggucugaggccccucagu	1105	1587	0,696	-0,362	3,23E-04	2,25E-02	0,253	2,72E-04	2,74E-02
SEQ ID NO: 852	hsa-miR-324-5p	cgcaucccccuagggcauuggugu	332	496	0,669	-0,402	1,01E-03	4,15E-02	0,286	1,48E-03	5,31E-02
SEQ ID NO: 21	hsa-miR-361-5p	uuaucagaaucuccagggguac	418	629	0,664	-0,410	2,52E-03	5,64E-02	0,320	2,59E-03	7,70E-02
SEQ ID NO: 420	hsa-miR-502-3p	aaugcaccugggcaaggauuca	662	926	0,714	-0,336	2,36E-03	5,64E-02	0,317	4,96E-03	9,73E-02
SEQ ID NO: 31	hsa-miR-19b	ugugcaaauccaugcaaaacuga	10422	12496	0,834	-0,181	3,06E-03	5,73E-02	0,338	1,86E-02	1,80E-01
SEQ ID NO: 97	hsa-miR-331-3p	gccccugggccuauccuagaa	970	1621	0,598	-0,513	3,43E-03	6,05E-02	0,299	3,09E-03	8,24E-02
SEQ ID NO: 101	hsa-miR-30b	uguaaacauccuacacucagcu	7318	6233	1,174	0,160	3,37E-03	6,05E-02	0,639	2,89E-02	2,25E-01
SEQ ID NO: 550	hsa-miR-142-5p	cauaaaguagaaagcacuacu	752	520	1,446	0,369	3,80E-03	6,19E-02	0,640	1,32E-01	4,40E-01
SEQ ID NO: 719	hsa-miR-328	cuggcccucucugcccuuccgu	57	123	0,466	-0,764	4,39E-04	2,40E-02	0,268	1,57E-03	5,41E-02
SEQ ID NO: 677	hsa-miR-193a-5p	ugggucuuugcgggcgagauga	55	125	0,441	-0,819	1,35E-03	5,08E-02	0,250	6,11E-04	4,13E-02
SEQ ID NO: 614	hsa-miR-485-3p	gucauacacggcucuccucucu	52	103	0,509	-0,675	1,96E-03	5,62E-02	0,273	1,40E-03	5,26E-02
SEQ ID NO: 667	hsa-miR-142-3p	uguaguguuuccuacuuuaugga	18	93	0,195	-1,632	2,13E-03	5,64E-02	0,300	2,59E-03	7,70E-02
SEQ ID NO: 404	hsa-miR-513b	uucacaaggaggugucauuuau	46	18	2,480	0,908	2,99E-03	5,73E-02	0,654	3,76E-02	2,54E-01
SEQ ID NO: 330	hsa-miR-220a	ccacaccguaucugacacuuu	61	29	2,064	0,725	3,17E-03	5,83E-02	0,685	4,87E-03	9,73E-02
SEQ ID NO: 313	hsa-miR-186	caaagaauucuccuuuugggcu	34	99	0,340	-1,078	6,67E-03	8,73E-02	0,298	3,50E-03	8,58E-02
SEQ ID NO: 555	hsa-miR-200a	uaacacugucugguaacgaugu	90	74	1,218	0,197	7,67E-03	9,07E-02	0,636	8,84E-02	3,84E-01

SEQ ID NO: 99	hsa-miR-145	guccaguuuucccaggaaucccu	131	288	0,488	-0,717	2,34E-03	5,64E-02	0,310	7,15E-03	1,10E-01
SEQ ID NO: 560	hsa-miR-103	agcagcauuguacagggcuauga	6845	3626	1,887	0,635	8,87E-05	1,28E-02	0,711	1,65E-02	1,76E-01
SEQ ID NO: 547	hsa-miR-148a	ucagugcacuacagaacuuugu	950	682	1,393	0,331	6,12E-05	1,20E-02	0,685	6,43E-02	3,32E-01
SEQ ID NO: 750	hsa-miR-107	agcagcauuguacagggcuauca	1305	774	1,686	0,523	2,19E-04	1,89E-02	0,685	1,93E-02	1,81E-01
SEQ ID NO: 636	hsa-miR-144*	ggauaucaucauauacuguaag	636	386	1,648	0,499	2,17E-03	5,64E-02	0,626	4,31E-01	7,56E-01
SEQ ID NO: 11	hsa-miR-20b	caaagugcucauagugcagguag	2820	2010	1,403	0,339	7,08E-03	8,80E-02	0,636	6,40E-01	8,75E-01
SEQ ID NO: 334	hsa-miR-490-5p	ccauggaucuccaggugggu	130	94	1,381	0,323	5,55E-03	8,02E-02	0,657	8,83E-03	1,25E-01

Figure 11B.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
L-1	SEQ ID NO: 735, SEQ ID NO: 699, SEQ ID NO: 714	hsa-miR-320d, hsa-miR-550, hsa-miR-320c	60%	60%	60%
L-2	SEQ ID NO: 714, SEQ ID NO: 623, SEQ ID NO: 74	hsa-miR-320c, hsa-miR-1274a, hsa-let-7d*	70%	82%	59%
L-3	SEQ ID NO: 74, SEQ ID NO: 854, SEQ ID NO: 558	hsa-let-7d*, hsa-miR-625, hsa-miR-183*	74%	86%	63%
L-4	SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 474	hsa-miR-183*, hsa-miR-21*, hsa-miR-182*	73%	78%	68%
L-5	SEQ ID NO: 474, SEQ ID NO: 171, SEQ ID NO: 701	hsa-miR-182*, hsa-miR-214*, hsa-miR-1303	72%	76%	68%
L-6	SEQ ID NO: 701, SEQ ID NO: 181, SEQ ID NO: 485	hsa-miR-1303, hsa-miR-891b, hsa-miR-30e*	67%	75%	58%
L-7	SEQ ID NO: 485, SEQ ID NO: 75, SEQ ID NO: 806	hsa-miR-30e*, hsa-miR-199a-5p, hsa-miR-125a-5p	80%	92%	68%
L-8	SEQ ID NO: 806, SEQ ID NO: 622, SEQ ID NO: 26	hsa-miR-125a-5p, hsa-miR-130b, hsa-miR-423-3p	76%	84%	68%
L-9	SEQ ID NO: 26, SEQ ID NO: 852, SEQ ID NO: 719	hsa-miR-423-3p, hsa-miR-324-5p, hsa-miR-328	75%	83%	67%
L-10	SEQ ID NO: 719, SEQ ID NO: 560, SEQ ID NO: 547	hsa-miR-328, hsa-miR-103, hsa-miR-148a	77%	84%	71%
L-11	SEQ ID NO: 547, SEQ ID NO: 750	hsa-miR-148a, hsa-miR-107	76%	82%	69%
L-12	SEQ ID NO: 735, SEQ ID NO: 699, SEQ ID NO: 714, SEQ ID NO: 623, SEQ ID NO: 74	hsa-miR-320d, hsa-miR-550, hsa-miR-320c, hsa-miR-1274a, hsa-let-7d*	71%	88%	54%
L-13	SEQ ID NO: 714, SEQ ID NO: 623, SEQ ID NO: 74, SEQ ID NO: 854, SEQ ID NO: 558	hsa-miR-320c, hsa-miR-1274a, hsa-let-7d*, hsa-miR-625, hsa-miR-183*	76%	86%	65%
L-14	SEQ ID NO: 74, SEQ ID NO: 854, SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 474	hsa-let-7d*, hsa-miR-625, hsa-miR-183*, hsa-miR-21*, hsa-miR-182*	77%	75%	78%

L-15	SEQ ID NO: 854, SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 474, SEQ ID NO: 171	hsa-miR-625, hsa-miR-183*, hsa-miR-21*, hsa-miR-182*, hsa-miR-214*	72%	72%	72%
L-16	SEQ ID NO: 430, SEQ ID NO: 474, SEQ ID NO: 171, SEQ ID NO: 701, SEQ ID NO: 181	hsa-miR-21*, hsa-miR-182*, hsa-miR-214*, hsa-miR-1303, hsa-miR-891b	76%	78%	75%
L-17	SEQ ID NO: 171, SEQ ID NO: 701, SEQ ID NO: 181, SEQ ID NO: 485, SEQ ID NO: 75	hsa-miR-214*, hsa-miR-1303, hsa-miR-891b, hsa-miR-30e*, hsa-miR-199a-5p	78%	85%	72%
L-18	SEQ ID NO: 701, SEQ ID NO: 181, SEQ ID NO: 485, SEQ ID NO: 75, SEQ ID NO: 806, SEQ ID NO: 622	hsa-miR-1303, hsa-miR-891b, hsa-miR-30e*, hsa-miR-199a-5p, hsa-miR-125a-5p, hsa-miR-130b	81%	88%	74%
L-19	SEQ ID NO: 75, SEQ ID NO: 806, SEQ ID NO: 622, SEQ ID NO: 26, SEQ ID NO: 852, SEQ ID NO: 719	hsa-miR-199a-5p, hsa-miR-125a-5p, hsa-miR-130b, hsa-miR-423-3p, hsa-miR-324-5p, hsa-miR-328	78%	88%	69%
L-20	SEQ ID NO: 26, SEQ ID NO: 852, SEQ ID NO: 719, SEQ ID NO: 560, SEQ ID NO: 547, SEQ ID NO: 750	hsa-miR-423-3p, hsa-miR-324-5p, hsa-miR-328, hsa-miR-103, hsa-miR-148a, hsa-miR-107	80%	84%	75%
L-21	SEQ ID NO: 735, SEQ ID NO: 699, SEQ ID NO: 714, SEQ ID NO: 623, SEQ ID NO: 74, SEQ ID NO: 854, SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 474, SEQ ID NO: 171	hsa-miR-320d, hsa-miR-550, hsa-miR-320c, hsa-miR-1274a, hsa-let-7d*, hsa-miR-625, hsa-miR-183*, hsa-miR-21*, hsa-miR-182*, hsa-miR-214*	75%	78%	72%
L-22	SEQ ID NO: 854, SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 474, SEQ ID NO: 171, SEQ ID NO: 701, SEQ ID NO: 181, SEQ ID NO: 485, SEQ ID NO: 75, SEQ ID NO: 806, SEQ ID NO: 622	hsa-miR-625, hsa-miR-183*, hsa-miR-21*, hsa-miR-182*, hsa-miR-214*, hsa-miR-1303, hsa-miR-891b, hsa-miR-30e*, hsa-miR-199a-5p, hsa-miR-125a-5p, hsa-miR-130b	81%	84%	78%
L-23	SEQ ID NO: 181, SEQ ID NO: 485, SEQ ID NO: 75, SEQ ID NO: 806, SEQ ID NO: 622, SEQ ID NO: 26, SEQ ID NO: 852, SEQ ID NO: 719, SEQ ID NO: 560, SEQ ID NO: 547	hsa-miR-891b, hsa-miR-30e*, hsa-miR-199a-5p, hsa-miR-125a-5p, hsa-miR-130b, hsa-miR-423-3p, hsa-miR-324-5p, hsa-miR-328, hsa-miR-103, hsa-miR-148a	79%	84%	75%

L-24	SEQ ID NO: 26, SEQ ID NO: 852, SEQ ID NO: 719, SEQ ID NO: 560, SEQ ID NO: 547, SEQ ID NO: 750	hsa-miR-423-3p, hsa-miR-324-5p, hsa-miR-328, hsa-miR-103, hsa-miR-148a, hsa-miR-107	81%	85%	76%
L-25	SEQ ID NO: 735, SEQ ID NO: 714, SEQ ID NO: 74, SEQ ID NO: 558, SEQ ID NO: 474	hsa-miR-320d, hsa-miR-320c, hsa-let-7d*, hsa-miR-183*, hsa-miR-182*	72%	83%	60%
L-26	SEQ ID NO: 623, SEQ ID NO: 854, SEQ ID NO: 430, SEQ ID NO: 171, SEQ ID NO: 181	hsa-miR-1274a, hsa-miR-625, hsa-miR-21*, hsa-miR-214*, hsa-miR-891b	78%	74%	82%
L-27	SEQ ID NO: 430, SEQ ID NO: 171, SEQ ID NO: 181, SEQ ID NO: 75, SEQ ID NO: 622	hsa-miR-21*, hsa-miR-214*, hsa-miR-891b, hsa-miR-199a-5p, hsa-miR-130b	74%	81%	68%
L-28	SEQ ID NO: 735, SEQ ID NO: 699, SEQ ID NO: 714	hsa-miR-320d, hsa-miR-550, hsa-miR-320c	61%	61%	60%
L-29	SEQ ID NO: 714, SEQ ID NO: 623, SEQ ID NO: 74	hsa-miR-320c, hsa-miR-1274a, hsa-let-7d*	72%	83%	61%
L-30	SEQ ID NO: 74, SEQ ID NO: 854, SEQ ID NO: 558	hsa-let-7d*, hsa-miR-625, hsa-miR-183*	73%	83%	62%
L-31	SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 474	hsa-miR-183*, hsa-miR-21*, hsa-miR-182*	73%	76%	70%
L-32	SEQ ID NO: 474, SEQ ID NO: 171, SEQ ID NO: 701	hsa-miR-182*, hsa-miR-214*, hsa-miR-1303	70%	75%	65%
L-33	SEQ ID NO: 701, SEQ ID NO: 181, SEQ ID NO: 485	hsa-miR-1303, hsa-miR-891b, hsa-miR-30e*	67%	76%	58%
L-34	SEQ ID NO: 485, SEQ ID NO: 75, SEQ ID NO: 806	hsa-miR-30e*, hsa-miR-199a-5p, hsa-miR-125a-5p	79%	91%	68%
L-35	SEQ ID NO: 806, SEQ ID NO: 560, SEQ ID NO: 547	hsa-miR-125a-5p, hsa-miR-103, hsa-miR-148a	76%	77%	75%
L-36	SEQ ID NO: 547, SEQ ID NO: 622, SEQ ID NO: 750	hsa-miR-148a, hsa-miR-130b, hsa-miR-107	78%	83%	72%
L-37	SEQ ID NO: 750, SEQ ID NO: 26, SEQ ID NO: 852	hsa-miR-107, hsa-miR-423-3p, hsa-miR-324-5p	74%	81%	67%
L-38	SEQ ID NO: 852, SEQ ID NO: 719	hsa-miR-324-5p, hsa-miR-328	74%	88%	60%

L-39	SEQ ID NO: 735, SEQ ID NO: 699, SEQ ID NO: 714, SEQ ID NO: 623, SEQ ID NO: 74	hsa-miR-320d, hsa-miR-550, hsa-miR-320c, hsa-miR-1274a, hsa-let-7d*	71%	87%	55%
L-40	SEQ ID NO: 714, SEQ ID NO: 623, SEQ ID NO: 74, SEQ ID NO: 854, SEQ ID NO: 558	hsa-miR-320c, hsa-miR-1274a, hsa-let-7d*, hsa-miR-625, hsa-miR-183*	77%	86%	67%
L-41	SEQ ID NO: 74, SEQ ID NO: 854, SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 474	hsa-let-7d*, hsa-miR-625, hsa-miR-183*, hsa-miR-21*, hsa-miR-182*	77%	75%	78%
L-42	SEQ ID NO: 854, SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 474, SEQ ID NO: 171	hsa-miR-625, hsa-miR-183*, hsa-miR-21*, hsa-miR-182*, hsa-miR-214*	72%	72%	72%
L-43	SEQ ID NO: 430, SEQ ID NO: 474, SEQ ID NO: 171, SEQ ID NO: 701, SEQ ID NO: 181	hsa-miR-21*, hsa-miR-182*, hsa-miR-214*, hsa-miR-1303, hsa-miR-891b	74%	75%	73%
L-44	SEQ ID NO: 171, SEQ ID NO: 701, SEQ ID NO: 181, SEQ ID NO: 485, SEQ ID NO: 75	hsa-miR-214*, hsa-miR-1303, hsa-miR-891b, hsa-miR-30e*, hsa-miR-199a-5p	80%	87%	73%
L-45	SEQ ID NO: 701, SEQ ID NO: 181, SEQ ID NO: 485, SEQ ID NO: 75, SEQ ID NO: 806, SEQ ID NO: 560	hsa-miR-1303, hsa-miR-891b, hsa-miR-30e*, hsa-miR-199a-5p, hsa-miR-125a-5p, hsa-miR-103	81%	87%	74%
L-46	SEQ ID NO: 75, SEQ ID NO: 806, SEQ ID NO: 560, SEQ ID NO: 547, SEQ ID NO: 622, SEQ ID NO: 750	hsa-miR-199a-5p, hsa-miR-125a-5p, hsa-miR-103, hsa-miR-148a, hsa-miR-130b, hsa-miR-107	81%	90%	72%
L-47	SEQ ID NO: 547, SEQ ID NO: 622, SEQ ID NO: 750, SEQ ID NO: 26, SEQ ID NO: 852, SEQ ID NO: 719	hsa-miR-148a, hsa-miR-130b, hsa-miR-107, hsa-miR-423-3p, hsa-miR-324-5p, hsa-miR-328	81%	85%	78%
L-48	SEQ ID NO: 735, SEQ ID NO: 699, SEQ ID NO: 714, SEQ ID NO: 623, SEQ ID NO: 74, SEQ ID NO: 854, SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 474, SEQ ID NO: 171	hsa-miR-320d, hsa-miR-550, hsa-miR-320c, hsa-miR-1274a, hsa-let-7d*, hsa-miR-625, hsa-miR-183*, hsa-miR-21*, hsa-miR-182*, hsa-miR-214*	73%	77%	69%

L-49	SEQ ID NO: 854, SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 474, SEQ ID NO: 171, SEQ ID NO: 701, SEQ ID NO: 181, SEQ ID NO: 485, SEQ ID NO: 75, SEQ ID NO: 806, SEQ ID NO: 560	hsa-miR-625, hsa-miR-183*, hsa-miR-21*, hsa-miR-182*, hsa-miR-214*, hsa-miR-1303, hsa-miR-891b, hsa-miR-30e*, hsa-miR-199a-5p, hsa-miR-125a-5p, hsa-miR-103	85%	84%	87%
L-50	SEQ ID NO: 181, SEQ ID NO: 485, SEQ ID NO: 75, SEQ ID NO: 806, SEQ ID NO: 560, SEQ ID NO: 547, SEQ ID NO: 622, SEQ ID NO: 750, SEQ ID NO: 26, SEQ ID NO: 852	hsa-miR-891b, hsa-miR-30e*, hsa-miR-199a-5p, hsa-miR-125a-5p, hsa-miR-103, hsa-miR-148a, hsa-miR-130b, hsa-miR-107, hsa-miR-423-3p, hsa-miR-324-5p	79%	84%	74%
L-51	SEQ ID NO: 547, SEQ ID NO: 622, SEQ ID NO: 750, SEQ ID NO: 26, SEQ ID NO: 852, SEQ ID NO: 719	hsa-miR-148a, hsa-miR-130b, hsa-miR-107, hsa-miR-423-3p, hsa-miR-324-5p, hsa-miR-328	81%	86%	77%
L-52	SEQ ID NO: 735, SEQ ID NO: 714, SEQ ID NO: 74, SEQ ID NO: 558, SEQ ID NO: 474	hsa-miR-320d, hsa-miR-320c, hsa-let-7d*, hsa-miR-183*, hsa-miR-182*	71%	82%	60%
L-53	SEQ ID NO: 623, SEQ ID NO: 854, SEQ ID NO: 430, SEQ ID NO: 171, SEQ ID NO: 181	hsa-miR-1274a, hsa-miR-625, hsa-miR-21*, hsa-miR-214*, hsa-miR-891b	75%	71%	80%
L-54	SEQ ID NO: 430, SEQ ID NO: 171, SEQ ID NO: 181, SEQ ID NO: 75, SEQ ID NO: 560	hsa-miR-21*, hsa-miR-214*, hsa-miR-891b, hsa-miR-199a-5p, hsa-miR-103	75%	78%	72%
L-55	SEQ ID NO: 75, SEQ ID NO: 806, SEQ ID NO: 735	hsa-miR-199a-5p, hsa-miR-125a-5p, hsa-miR-320d	80%	93%	67%
L-56	SEQ ID NO: 735, SEQ ID NO: 699, SEQ ID NO: 714	hsa-miR-320d, hsa-miR-550, hsa-miR-320c	60%	61%	59%
L-57	SEQ ID NO: 714, SEQ ID NO: 623, SEQ ID NO: 622	hsa-miR-320c, hsa-miR-1274a, hsa-miR-130b	69%	72%	65%
L-58	SEQ ID NO: 622, SEQ ID NO: 26, SEQ ID NO: 852	hsa-miR-130b, hsa-miR-423-3p, hsa-miR-324-5p	67%	66%	68%
L-59	SEQ ID NO: 852, SEQ ID NO: 74, SEQ ID NO: 854	hsa-miR-324-5p, hsa-let-7d*, hsa-miR-625	75%	86%	64%

L-60	SEQ ID NO: 854, SEQ ID NO: 719, SEQ ID NO: 558	hsa-miR-625, hsa-miR-328, hsa-miR-183*	71%	82%	60%
L-61	SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 474	hsa-miR-183*, hsa-miR-21*, hsa-miR-182*	73%	76%	70%
L-62	SEQ ID NO: 474, SEQ ID NO: 171, SEQ ID NO: 701	hsa-miR-182*, hsa-miR-214*, hsa-miR-1303	71%	76%	67%
L-63	SEQ ID NO: 701, SEQ ID NO: 181, SEQ ID NO: 485	hsa-miR-1303, hsa-miR-891b, hsa-miR-30e*	65%	73%	56%
L-64	SEQ ID NO: 485, SEQ ID NO: 560, SEQ ID NO: 547	hsa-miR-30e*, hsa-miR-103, hsa-miR-148a	79%	78%	80%
L-65	SEQ ID NO: 547, SEQ ID NO: 750	hsa-miR-148a, hsa-miR-107	75%	81%	68%
L-66	SEQ ID NO: 75, SEQ ID NO: 806, SEQ ID NO: 735, SEQ ID NO: 699, SEQ ID NO: 714	hsa-miR-199a-5p, hsa-miR-125a-5p, hsa-miR-320d, hsa-miR-550, hsa-miR-320c	77%	92%	61%
L-67	SEQ ID NO: 735, SEQ ID NO: 699, SEQ ID NO: 714, SEQ ID NO: 623, SEQ ID NO: 622	hsa-miR-320d, hsa-miR-550, hsa-miR-320c, hsa-miR-1274a, hsa-miR-130b	68%	72%	64%
L-68	SEQ ID NO: 714, SEQ ID NO: 623, SEQ ID NO: 622, SEQ ID NO: 26, SEQ ID NO: 852	hsa-miR-320c, hsa-miR-1274a, hsa-miR-130b, hsa-miR-423-3p, hsa-miR-324-5p	78%	78%	79%
L-69	SEQ ID NO: 623, SEQ ID NO: 622, SEQ ID NO: 26, SEQ ID NO: 852, SEQ ID NO: 74	hsa-miR-1274a, hsa-miR-130b, hsa-miR-423-3p, hsa-miR-324-5p, hsa-let-7d*	76%	82%	70%
L-70	SEQ ID NO: 26, SEQ ID NO: 852, SEQ ID NO: 74, SEQ ID NO: 854, SEQ ID NO: 719	hsa-miR-423-3p, hsa-miR-324-5p, hsa-let-7d*, hsa-miR-625, hsa-miR-328	78%	85%	72%
L-71	SEQ ID NO: 74, SEQ ID NO: 854, SEQ ID NO: 719, SEQ ID NO: 558, SEQ ID NO: 430	hsa-let-7d*, hsa-miR-625, hsa-miR-328, hsa-miR-183*, hsa-miR-21*	71%	80%	63%
L-72	SEQ ID NO: 854, SEQ ID NO: 719, SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 474, SEQ ID NO: 171	hsa-miR-625, hsa-miR-328, hsa-miR-183*, hsa-miR-21*, hsa-miR-182*, hsa-miR-214*	70%	72%	69%

L-73	SEQ ID NO: 430, SEQ ID NO: 474, SEQ ID NO: 171, SEQ ID NO: 701, SEQ ID NO: 181, SEQ ID NO: 485	hsa-miR-21*, hsa-miR-182*, hsa-miR-214*, hsa-miR-1303, hsa-miR-891b, hsa-miR-30e*	75%	74%	76%
L-74	SEQ ID NO: 701, SEQ ID NO: 181, SEQ ID NO: 485, SEQ ID NO: 560, SEQ ID NO: 547, SEQ ID NO: 750	hsa-miR-1303, hsa-miR-891b, hsa-miR-30e*, hsa-miR-103, hsa-miR-148a, hsa-miR-107	82%	77%	87%
L-75	SEQ ID NO: 75, SEQ ID NO: 806, SEQ ID NO: 735, SEQ ID NO: 699, SEQ ID NO: 714, SEQ ID NO: 623, SEQ ID NO: 622, SEQ ID NO: 26, SEQ ID NO: 852, SEQ ID NO: 74	hsa-miR-199a-5p, hsa-miR-125a-5p, hsa-miR-320d, hsa-miR-550, hsa-miR-320c, hsa-miR-1274a, hsa-miR-130b, hsa-miR-423-3p, hsa-miR-324-5p, hsa-let-7d*	77%	88%	66%
L-76	SEQ ID NO: 623, SEQ ID NO: 622, SEQ ID NO: 26, SEQ ID NO: 852, SEQ ID NO: 74, SEQ ID NO: 854, SEQ ID NO: 719, SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 474, SEQ ID NO: 171	hsa-miR-1274a, hsa-miR-130b, hsa-miR-423-3p, hsa-miR-324-5p, hsa-let-7d*, hsa-miR-625, hsa-miR-328, hsa-miR-183*, hsa-miR-21*, hsa-miR-182*, hsa-miR-214*	79%	80%	79%
L-77	SEQ ID NO: 719, SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 474, SEQ ID NO: 171, SEQ ID NO: 701, SEQ ID NO: 181, SEQ ID NO: 485, SEQ ID NO: 560, SEQ ID NO: 547	hsa-miR-328, hsa-miR-183*, hsa-miR-21*, hsa-miR-182*, hsa-miR-214*, hsa-miR-1303, hsa-miR-891b, hsa-miR-30e*, hsa-miR-103, hsa-miR-148a	88%	87%	89%
L-78	SEQ ID NO: 701, SEQ ID NO: 181, SEQ ID NO: 485, SEQ ID NO: 560, SEQ ID NO: 547, SEQ ID NO: 750	hsa-miR-1303, hsa-miR-891b, hsa-miR-30e*, hsa-miR-103, hsa-miR-148a, hsa-miR-107	80%	76%	84%
L-79	SEQ ID NO: 75, SEQ ID NO: 735, SEQ ID NO: 714, SEQ ID NO: 622, SEQ ID NO: 852	hsa-miR-199a-5p, hsa-miR-320d, hsa-miR-320c, hsa-miR-130b, hsa-miR-324-5p	72%	80%	63%
L-80	SEQ ID NO: 699, SEQ ID NO: 623, SEQ ID NO: 26, SEQ ID NO: 74, SEQ ID NO: 719	hsa-miR-550, hsa-miR-1274a, hsa-miR-423-3p, hsa-let-7d*, hsa-miR-328	74%	77%	71%
L-81	SEQ ID NO: 26, SEQ ID NO: 74, SEQ ID NO: 719, SEQ ID NO: 430, SEQ ID NO: 171	hsa-miR-423-3p, hsa-let-7d*, hsa-miR-328, hsa-miR-21*, hsa-miR-214*	75%	79%	71%

L-82	SEQ ID NO: 75, SEQ ID NO: 806, SEQ ID NO: 526	hsa-miR-199a-5p, hsa-miR-125a-5p, hsa-miR-500	78%	92%	64%
L-83	SEQ ID NO: 526, SEQ ID NO: 735, SEQ ID NO: 699	hsa-miR-500, hsa-miR-320d, hsa-miR-550	65%	72%	58%
L-84	SEQ ID NO: 699, SEQ ID NO: 622, SEQ ID NO: 714	hsa-miR-550, hsa-miR-130b, hsa-miR-320c	65%	66%	63%
L-85	SEQ ID NO: 714, SEQ ID NO: 26, SEQ ID NO: 852	hsa-miR-320c, hsa-miR-423-3p, hsa-miR-324-5p	65%	67%	62%
L-86	SEQ ID NO: 852, SEQ ID NO: 623, SEQ ID NO: 565	hsa-miR-324-5p, hsa-miR-1274a, hsa-miR-1913	76%	83%	70%
L-87	SEQ ID NO: 565, SEQ ID NO: 21, SEQ ID NO: 420	hsa-miR-1913, hsa-miR-361-5p, hsa-miR-502-3p	67%	77%	57%
L-88	SEQ ID NO: 420, SEQ ID NO: 31, SEQ ID NO: 97	hsa-miR-502-3p, hsa-miR-19b, hsa-miR-331-3p	74%	76%	73%
L-89	SEQ ID NO: 97, SEQ ID NO: 101, SEQ ID NO: 550	hsa-miR-331-3p, hsa-miR-30b, hsa-miR-142-5p	77%	86%	69%
L-90	SEQ ID NO: 550, SEQ ID NO: 780, SEQ ID NO: 815	hsa-miR-142-5p, hsa-miR-564, hsa-miR-1274b	71%	74%	68%
L-91	SEQ ID NO: 815, SEQ ID NO: 544, SEQ ID NO: 719	hsa-miR-1274b, hsa-miR-1826, hsa-miR-328	72%	83%	61%
L-92	SEQ ID NO: 719, SEQ ID NO: 74, SEQ ID NO: 854	hsa-miR-328, hsa-let-7d*, hsa-miR-625	73%	84%	62%
L-93	SEQ ID NO: 854, SEQ ID NO: 677, SEQ ID NO: 134	hsa-miR-625, hsa-miR-193a-5p, hsa-miR-378*	72%	90%	53%
L-94	SEQ ID NO: 134, SEQ ID NO: 430, SEQ ID NO: 597	hsa-miR-378*, hsa-miR-21*, hsa-miR-877	70%	79%	60%
L-95	SEQ ID NO: 430, SEQ ID NO: 614, SEQ ID NO: 597	hsa-miR-21*, hsa-miR-485-3p, hsa-miR-877	73%	78%	68%
L-96	SEQ ID NO: 597, SEQ ID NO: 22, SEQ ID NO: 303	hsa-miR-877, hsa-miR-1283, hsa-miR-1286	70%	74%	66%
L-97	SEQ ID NO: 75, SEQ ID NO: 806, SEQ ID NO: 526, SEQ ID NO: 735, SEQ ID NO: 699	hsa-miR-199a-5p, hsa-miR-125a-5p, hsa-miR-500, hsa-miR-320d, hsa-miR-550	78%	89%	67%

L-98	SEQ ID NO: 526, SEQ ID NO: 735, SEQ ID NO: 699, SEQ ID NO: 622, SEQ ID NO: 714	hsa-miR-500, hsa-miR-320d, hsa-miR-550, hsa-miR-130b, hsa-miR-320c	67%	72%	63%
L-99	SEQ ID NO: 699, SEQ ID NO: 622, SEQ ID NO: 714, SEQ ID NO: 26, SEQ ID NO: 852	hsa-miR-550, hsa-miR-130b, hsa-miR-320c, hsa-miR-423-3p, hsa-miR-324-5p	70%	76%	63%
L-100	SEQ ID NO: 622, SEQ ID NO: 714, SEQ ID NO: 26, SEQ ID NO: 852, SEQ ID NO: 623	hsa-miR-130b, hsa-miR-320c, hsa-miR-423-3p, hsa-miR-324-5p, hsa-miR-1274a	78%	77%	78%
L-101	SEQ ID NO: 26, SEQ ID NO: 852, SEQ ID NO: 623, SEQ ID NO: 565, SEQ ID NO: 21	hsa-miR-423-3p, hsa-miR-324-5p, hsa-miR-1274a, hsa-miR-1913, hsa-miR-361-5p	84%	87%	82%
L-102	SEQ ID NO: 623, SEQ ID NO: 565, SEQ ID NO: 21, SEQ ID NO: 420, SEQ ID NO: 31	hsa-miR-1274a, hsa-miR-1913, hsa-miR-361-5p, hsa-miR-502-3p, hsa-miR-19b	81%	81%	81%
L-103	SEQ ID NO: 565, SEQ ID NO: 21, SEQ ID NO: 420, SEQ ID NO: 31, SEQ ID NO: 97, SEQ ID NO: 101	hsa-miR-1913, hsa-miR-361-5p, hsa-miR-502-3p, hsa-miR-19b, hsa-miR-331-3p, hsa-miR-30b	75%	77%	73%
L-104	SEQ ID NO: 31, SEQ ID NO: 97, SEQ ID NO: 101, SEQ ID NO: 550, SEQ ID NO: 780, SEQ ID NO: 815	hsa-miR-19b, hsa-miR-331-3p, hsa-miR-30b, hsa-miR-142-5p, hsa-miR-564, hsa-miR-1274b	82%	88%	76%
L-105	SEQ ID NO: 550, SEQ ID NO: 780, SEQ ID NO: 815, SEQ ID NO: 544, SEQ ID NO: 719, SEQ ID NO: 74	hsa-miR-142-5p, hsa-miR-564, hsa-miR-1274b, hsa-miR-1826, hsa-miR-328, hsa-let-7d*	78%	81%	75%
L-106	SEQ ID NO: 544, SEQ ID NO: 719, SEQ ID NO: 74, SEQ ID NO: 854, SEQ ID NO: 677, SEQ ID NO: 134	hsa-miR-1826, hsa-miR-328, hsa-let-7d*, hsa-miR-625, hsa-miR-193a-5p, hsa-miR-378*	69%	84%	54%
L-107	SEQ ID NO: 854, SEQ ID NO: 677, SEQ ID NO: 134, SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 614	hsa-miR-625, hsa-miR-193a-5p, hsa-miR-378*, hsa-miR-183*, hsa-miR-21*, hsa-miR-485-3p	77%	84%	71%
L-108	SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 614, SEQ ID NO: 597, SEQ ID NO: 22, SEQ ID NO: 303	hsa-miR-183*, hsa-miR-21*, hsa-miR-485-3p, hsa-miR-877, hsa-miR-1283, hsa-miR-1286	73%	75%	71%

L-109	SEQ ID NO: 597, SEQ ID NO: 22, SEQ ID NO: 303, SEQ ID NO: 771, SEQ ID NO: 454, SEQ ID NO: 81	hsa-miR-877, hsa-miR-1283, hsa-miR-1286, hsa-miR-518f*, hsa-miR-659, hsa-miR-922	69%	77%	61%
L-110	SEQ ID NO: 771, SEQ ID NO: 454, SEQ ID NO: 81, SEQ ID NO: 202, SEQ ID NO: 42, SEQ ID NO: 474, SEQ ID NO: 42	hsa-miR-518f*, hsa-miR-659, hsa-miR-922, hsa-miR-508-5p, hsa-miR-182*, hsa-miR-29c*	73%	83%	62%
L-111	SEQ ID NO: 202, SEQ ID NO: 474, SEQ ID NO: 42, SEQ ID NO: 505, SEQ ID NO: 368, SEQ ID NO: 667	hsa-miR-508-5p, hsa-miR-182*, hsa-miR-29c*, hsa-miR-942, hsa-miR-767-3p, hsa-miR-142-3p	71%	80%	62%
L-112	SEQ ID NO: 75, SEQ ID NO: 806, SEQ ID NO: 526, SEQ ID NO: 735, SEQ ID NO: 699, SEQ ID NO: 622, SEQ ID NO: 714, SEQ ID NO: 26, SEQ ID NO: 852, SEQ ID NO: 623	hsa-miR-199a-5p, hsa-miR-125a-5p, hsa-miR-500, hsa-miR-320d, hsa-miR-550, hsa-miR-130b, hsa-miR-320c, hsa-miR-423-3p, hsa-miR-324-5p, hsa-miR-1274a	75%	81%	68%
L-113	SEQ ID NO: 622, SEQ ID NO: 714, SEQ ID NO: 26, SEQ ID NO: 852, SEQ ID NO: 623, SEQ ID NO: 565, SEQ ID NO: 21, SEQ ID NO: 420, SEQ ID NO: 31, SEQ ID NO: 97, SEQ ID NO: 101	hsa-miR-130b, hsa-miR-320c, hsa-miR-423-3p, hsa-miR-324-5p, hsa-miR-1274a, hsa-miR-1913, hsa-miR-361-5p, hsa-miR-502-3p, hsa-miR-19b, hsa-miR-331-3p, hsa-miR-30b	81%	80%	83%
L-114	SEQ ID NO: 21, SEQ ID NO: 420, SEQ ID NO: 31, SEQ ID NO: 97, SEQ ID NO: 101, SEQ ID NO: 550, SEQ ID NO: 780, SEQ ID NO: 815, SEQ ID NO: 544, SEQ ID NO: 719	hsa-miR-361-5p, hsa-miR-502-3p, hsa-miR-19b, hsa-miR-331-3p, hsa-miR-30b, hsa-miR-142-5p, hsa-miR-564, hsa-miR-1274b, hsa-miR-1826, hsa-miR-328	80%	82%	79%
L-115	SEQ ID NO: 550, SEQ ID NO: 780, SEQ ID NO: 815, SEQ ID NO: 544, SEQ ID NO: 719, SEQ ID NO: 74, SEQ ID NO: 854, SEQ ID NO: 677, SEQ ID NO: 134, SEQ ID NO: 558	hsa-miR-142-5p, hsa-miR-564, hsa-miR-1274b, hsa-miR-1826, hsa-miR-328, hsa-let-7d*, hsa-miR-625, hsa-miR-193a-5p, hsa-miR-378*, hsa-miR-183*	76%	84%	67%

L-116	SEQ ID NO: 74, SEQ ID NO: 854, SEQ ID NO: 677, SEQ ID NO: 134, SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 614, SEQ ID NO: 597, SEQ ID NO: 22, SEQ ID NO: 303	hsa-let-7d*, hsa-miR-625, hsa-miR-193a-5p, hsa-miR-378*, hsa-miR-183*, hsa-miR-21*, hsa-miR-485-3p, hsa-miR-877, hsa-miR-1283, hsa-miR-1286	74%	77%	70%
L-117	SEQ ID NO: 430, SEQ ID NO: 614, SEQ ID NO: 597, SEQ ID NO: 22, SEQ ID NO: 303, SEQ ID NO: 771, SEQ ID NO: 454, SEQ ID NO: 81, SEQ ID NO: 202, SEQ ID NO: 474	hsa-miR-21*, hsa-miR-485-3p, hsa-miR-877, hsa-miR-1283, hsa-miR-1286, hsa-miR-518f*, hsa-miR-659, hsa-miR-922, hsa-miR-508-5p, hsa-miR-182*	69%	76%	62%
L-118	SEQ ID NO: 771, SEQ ID NO: 454, SEQ ID NO: 81, SEQ ID NO: 202, SEQ ID NO: 474, SEQ ID NO: 42, SEQ ID NO: 505, SEQ ID NO: 368, SEQ ID NO: 667, SEQ ID NO: 110	hsa-miR-518f*, hsa-miR-659, hsa-miR-922, hsa-miR-508-5p, hsa-miR-182*, hsa-miR-29c*, hsa-miR-942, hsa-miR-767-3p, hsa-miR-142-3p, hsa-miR-1256	70%	80%	61%
L-119	SEQ ID NO: 42, SEQ ID NO: 505, SEQ ID NO: 368, SEQ ID NO: 667, SEQ ID NO: 110, SEQ ID NO: 404, SEQ ID NO: 330, SEQ ID NO: 366, SEQ ID NO: 718, SEQ ID NO: 659	hsa-miR-29c*, hsa-miR-942, hsa-miR-767-3p, hsa-miR-142-3p, hsa-miR-1256, hsa-miR-513b, hsa-miR-220a, hsa-miR-369-5p, hsa-miR-1825, hsa-miR-519e*	69%	84%	53%
L-120	SEQ ID NO: 404, SEQ ID NO: 330, SEQ ID NO: 366, SEQ ID NO: 718, SEQ ID NO: 659, SEQ ID NO: 377, SEQ ID NO: 313, SEQ ID NO: 643, SEQ ID NO: 171, SEQ ID NO: 701	hsa-miR-513b, hsa-miR-220a, hsa-miR-369-5p, hsa-miR-1825, hsa-miR-519e*, hsa-miR-1206, hsa-miR-186, hsa-miR-483-3p, hsa-miR-214*, hsa-miR-1303	67%	76%	57%
L-121	SEQ ID NO: 75, SEQ ID NO: 526, SEQ ID NO: 699, SEQ ID NO: 714, SEQ ID NO: 852	hsa-miR-199a-5p, hsa-miR-500, hsa-miR-550, hsa-miR-320c, hsa-miR-324-5p	76%	84%	69%
L-122	SEQ ID NO: 735, SEQ ID NO: 622, SEQ ID NO: 26, SEQ ID NO: 623, SEQ ID NO: 21	hsa-miR-320d, hsa-miR-130b, hsa-miR-423-3p, hsa-miR-1274a, hsa-miR-361-5p	76%	76%	76%
L-123	SEQ ID NO: 26, SEQ ID NO: 623, SEQ ID NO: 21, SEQ ID NO: 31, SEQ ID NO: 101	hsa-miR-423-3p, hsa-miR-1274a, hsa-miR-361-5p, hsa-miR-19b, hsa-miR-30b	78%	75%	80%

L-124	SEQ ID NO: 526, SEQ ID NO: 735, SEQ ID NO: 699	hsa-miR-500, hsa-miR-320d, hsa-miR-550	65%	73%	57%
L-125	SEQ ID NO: 699, SEQ ID NO: 714, SEQ ID NO: 623	hsa-miR-550, hsa-miR-320c, hsa-miR-1274a	66%	71%	61%
L-126	SEQ ID NO: 623, SEQ ID NO: 565, SEQ ID NO: 780	hsa-miR-1274a, hsa-miR-1913, hsa-miR-564	69%	79%	59%
L-127	SEQ ID NO: 780, SEQ ID NO: 815, SEQ ID NO: 544	hsa-miR-564, hsa-miR-1274b, hsa-miR-1826	68%	75%	60%
L-128	SEQ ID NO: 544, SEQ ID NO: 74, SEQ ID NO: 854	hsa-miR-1826, hsa-let-7d*, hsa-miR-625	71%	85%	58%
L-129	SEQ ID NO: 854, SEQ ID NO: 134, SEQ ID NO: 558	hsa-miR-625, hsa-miR-378*, hsa-miR-183*	74%	90%	59%
L-130	SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 597	hsa-miR-183*, hsa-miR-21*, hsa-miR-877	68%	65%	70%
L-131	SEQ ID NO: 597, SEQ ID NO: 22, SEQ ID NO: 303	hsa-miR-877, hsa-miR-1283, hsa-miR-1286	69%	75%	63%
L-132	SEQ ID NO: 303, SEQ ID NO: 771, SEQ ID NO: 454	hsa-miR-1286, hsa-miR-518f*, hsa-miR-659	64%	61%	67%
L-133	SEQ ID NO: 454, SEQ ID NO: 81, SEQ ID NO: 202	hsa-miR-659, hsa-miR-922, hsa-miR-508-5p	59%	61%	57%
L-134	SEQ ID NO: 202, SEQ ID NO: 474, SEQ ID NO: 42	hsa-miR-508-5p, hsa-miR-182*, hsa-miR-29c*	72%	84%	59%
L-135	SEQ ID NO: 42, SEQ ID NO: 505, SEQ ID NO: 368	hsa-miR-29c*, hsa-miR-942, hsa-miR-767-3p	69%	74%	63%
L-136	SEQ ID NO: 368, SEQ ID NO: 366, SEQ ID NO: 659	hsa-miR-767-3p, hsa-miR-369-5p, hsa-miR-519e*	66%	80%	52%
L-137	SEQ ID NO: 366, SEQ ID NO: 718, SEQ ID NO: 659	hsa-miR-369-5p, hsa-miR-1825, hsa-miR-519e*	64%	78%	51%
L-138	SEQ ID NO: 659, SEQ ID NO: 377, SEQ ID NO: 643	hsa-miR-519e*, hsa-miR-1206, hsa-miR-483-3p	63%	74%	51%
L-139	SEQ ID NO: 526, SEQ ID NO: 735, SEQ ID NO: 699, SEQ ID NO: 714, SEQ ID NO: 623	hsa-miR-500, hsa-miR-320d, hsa-miR-550, hsa-miR-320c, hsa-miR-1274a	71%	76%	66%

L-140	SEQ ID NO: 699, SEQ ID NO: 714, SEQ ID NO: 623, SEQ ID NO: 565, SEQ ID NO: 780	hsa-miR-550, hsa-miR-320c, hsa-miR-1274a, hsa-miR-1913, hsa-miR-564	67%	72%	62%
L-141	SEQ ID NO: 623, SEQ ID NO: 565, SEQ ID NO: 780, SEQ ID NO: 815, SEQ ID NO: 544	hsa-miR-1274a, hsa-miR-1913, hsa-miR-564, hsa-miR-1274b, hsa-miR-1826	71%	76%	67%
L-142	SEQ ID NO: 565, SEQ ID NO: 780, SEQ ID NO: 815, SEQ ID NO: 544, SEQ ID NO: 74	hsa-miR-1913, hsa-miR-564, hsa-miR-1274b, hsa-miR-1826, hsa-let-7d*	73%	81%	65%
L-143	SEQ ID NO: 815, SEQ ID NO: 544, SEQ ID NO: 74, SEQ ID NO: 854, SEQ ID NO: 134	hsa-miR-1274b, hsa-miR-1826, hsa-let-7d*, hsa-miR-625, hsa-miR-378*	75%	88%	63%
L-144	SEQ ID NO: 74, SEQ ID NO: 854, SEQ ID NO: 134, SEQ ID NO: 558, SEQ ID NO: 430	hsa-let-7d*, hsa-miR-625, hsa-miR-378*, hsa-miR-183*, hsa-miR-21*	75%	80%	71%
L-145	SEQ ID NO: 854, SEQ ID NO: 134, SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 597, SEQ ID NO: 22	hsa-miR-625, hsa-miR-378*, hsa-miR-183*, hsa-miR-21*, hsa-miR-877, hsa-miR-1283	71%	76%	67%
L-146	SEQ ID NO: 430, SEQ ID NO: 597, SEQ ID NO: 22, SEQ ID NO: 303, SEQ ID NO: 771, SEQ ID NO: 454	hsa-miR-21*, hsa-miR-877, hsa-miR-1283, hsa-miR-1286, hsa-miR-518f*, hsa-miR-659	68%	73%	63%
L-147	SEQ ID NO: 303, SEQ ID NO: 771, SEQ ID NO: 454, SEQ ID NO: 81, SEQ ID NO: 202, SEQ ID NO: 474	hsa-miR-1286, hsa-miR-518f*, hsa-miR-659, hsa-miR-922, hsa-miR-508-5p, hsa-miR-182*	67%	74%	61%
L-148	SEQ ID NO: 81, SEQ ID NO: 202, SEQ ID NO: 474, SEQ ID NO: 42, SEQ ID NO: 505, SEQ ID NO: 368	hsa-miR-922, hsa-miR-508-5p, hsa-miR-182*, hsa-miR-29c*, hsa-miR-942, hsa-miR-767-3p	71%	80%	63%
L-149	SEQ ID NO: 42, SEQ ID NO: 505, SEQ ID NO: 368, SEQ ID NO: 110, SEQ ID NO: 366, SEQ ID NO: 718	hsa-miR-29c*, hsa-miR-942, hsa-miR-767-3p, hsa-miR-1256, hsa-miR-369-5p, hsa-miR-1825	67%	81%	53%
L-150	SEQ ID NO: 110, SEQ ID NO: 366, SEQ ID NO: 718, SEQ ID NO: 659, SEQ ID NO: 377, SEQ ID NO: 643	hsa-miR-1256, hsa-miR-369-5p, hsa-miR-1825, hsa-miR-519e*, hsa-miR-1206, hsa-miR-483-3p	65%	79%	52%

L-151	SEQ ID NO: 659, SEQ ID NO: 377, SEQ ID NO: 643, SEQ ID NO: 171, SEQ ID NO: 701, SEQ ID NO: 181	hsa-miR-519e*, hsa-miR-1206, hsa-miR-483-3p, hsa-miR-214*, hsa-miR-1303, hsa-miR-891b	70%	79%	62%
L-152	SEQ ID NO: 171, SEQ ID NO: 701, SEQ ID NO: 181, SEQ ID NO: 485, SEQ ID NO: 746, SEQ ID NO: 39	hsa-miR-214*, hsa-miR-1303, hsa-miR-891b, hsa-miR-30e*, hsa-miR-155*, hsa-miR-668	74%	75%	74%
L-153	SEQ ID NO: 485, SEQ ID NO: 746, SEQ ID NO: 39, SEQ ID NO: 624, SEQ ID NO: 108, SEQ ID NO: 149	hsa-miR-30e*, hsa-miR-155*, hsa-miR-668, hsa-miR-1226, hsa-miR-34a*, hsa-miR-647	72%	70%	73%
L-154	SEQ ID NO: 526, SEQ ID NO: 735, SEQ ID NO: 699, SEQ ID NO: 714, SEQ ID NO: 623, SEQ ID NO: 565, SEQ ID NO: 780, SEQ ID NO: 815, SEQ ID NO: 544, SEQ ID NO: 74	hsa-miR-500, hsa-miR-320d, hsa-miR-550, hsa-miR-320c, hsa-miR-1274a, hsa-miR-1913, hsa-miR-564, hsa-miR-1274b, hsa-miR-1826, hsa-let-7d*	75%	85%	64%
L-155	SEQ ID NO: 565, SEQ ID NO: 780, SEQ ID NO: 815, SEQ ID NO: 544, SEQ ID NO: 74, SEQ ID NO: 854, SEQ ID NO: 134, SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 597, SEQ ID NO: 22	hsa-miR-1913, hsa-miR-564, hsa-miR-1274b, hsa-miR-1826, hsa-let-7d*, hsa-miR-625, hsa-miR-378*, hsa-miR-183*, hsa-miR-21*, hsa-miR-877, hsa-miR-1283	75%	83%	67%
L-156	SEQ ID NO: 134, SEQ ID NO: 558, SEQ ID NO: 430, SEQ ID NO: 597, SEQ ID NO: 22, SEQ ID NO: 303, SEQ ID NO: 771, SEQ ID NO: 454, SEQ ID NO: 81, SEQ ID NO: 202	hsa-miR-378*, hsa-miR-183*, hsa-miR-21*, hsa-miR-877, hsa-miR-1283, hsa-miR-1286, hsa-miR-518f*, hsa-miR-659, hsa-miR-922, hsa-miR-508-5p	72%	75%	68%
L-157	SEQ ID NO: 303, SEQ ID NO: 771, SEQ ID NO: 454, SEQ ID NO: 81, SEQ ID NO: 202, SEQ ID NO: 474, SEQ ID NO: 42, SEQ ID NO: 505, SEQ ID NO: 368, SEQ ID NO: 110	hsa-miR-1286, hsa-miR-518f*, hsa-miR-659, hsa-miR-922, hsa-miR-508-5p, hsa-miR-182*, hsa-miR-29c*, hsa-miR-942, hsa-miR-767-3p, hsa-miR-1256	71%	80%	62%

L-158	SEQ ID NO: 474, SEQ ID NO: 42, SEQ ID NO: 505, SEQ ID NO: 368, SEQ ID NO: 110, SEQ ID NO: 366, SEQ ID NO: 718, SEQ ID NO: 659, SEQ ID NO: 377, SEQ ID NO: 643	hsa-miR-182*, hsa-miR-29c*, hsa-miR-942, hsa-miR-767-3p, hsa-miR-1256, hsa-miR-369-5p, hsa-miR-1825, hsa-miR-519e*, hsa-miR-1206, hsa-miR-483-3p	76%	88%	64%
L-159	SEQ ID NO: 366, SEQ ID NO: 718, SEQ ID NO: 659, SEQ ID NO: 377, SEQ ID NO: 643, SEQ ID NO: 171, SEQ ID NO: 701, SEQ ID NO: 181, SEQ ID NO: 485, SEQ ID NO: 746	hsa-miR-369-5p, hsa-miR-1825, hsa-miR-519e*, hsa-miR-1206, hsa-miR-483-3p, hsa-miR-214*, hsa-miR-1303, hsa-miR-891b, hsa-miR-30e*, hsa-miR-155*	69%	77%	60%
L-160	SEQ ID NO: 171, SEQ ID NO: 701, SEQ ID NO: 181, SEQ ID NO: 485, SEQ ID NO: 746, SEQ ID NO: 39, SEQ ID NO: 624, SEQ ID NO: 108, SEQ ID NO: 149, SEQ ID NO: 631	hsa-miR-214*, hsa-miR-1303, hsa-miR-891b, hsa-miR-30e*, hsa-miR-155*, hsa-miR-668, hsa-miR-1226, hsa-miR-34a*, hsa-miR-647, hsa-miR-610	72%	75%	68%
L-161	SEQ ID NO: 39, SEQ ID NO: 624, SEQ ID NO: 108, SEQ ID NO: 149, SEQ ID NO: 631, SEQ ID NO: 499, SEQ ID NO: 79, SEQ ID NO: 621, SEQ ID NO: 431, SEQ ID NO: 279	hsa-miR-668, hsa-miR-1226, hsa-miR-34a*, hsa-miR-647, hsa-miR-610, hsa-miR-141*, hsa-miR-297, hsa-miR-935, hsa-miR-657, hsa-miR-548a-3p	65%	73%	58%
L-162	SEQ ID NO: 499, SEQ ID NO: 79, SEQ ID NO: 621, SEQ ID NO: 431, SEQ ID NO: 279, SEQ ID NO: 459, SEQ ID NO: 185, SEQ ID NO: 188, SEQ ID NO: 75, SEQ ID NO: 806	hsa-miR-141*, hsa-miR-297, hsa-miR-935, hsa-miR-657, hsa-miR-548a-3p, hsa-miR-802, hsa-miR-208b, hsa-miR-146b-3p, hsa-miR-199a-5p, hsa-miR-125a-5p	72%	81%	63%
L-163	SEQ ID NO: 526, SEQ ID NO: 699, SEQ ID NO: 623, SEQ ID NO: 780, SEQ ID NO: 544	hsa-miR-500, hsa-miR-550, hsa-miR-1274a, hsa-miR-564, hsa-miR-1826	66%	73%	59%
L-164	SEQ ID NO: 714, SEQ ID NO: 565, SEQ ID NO: 815, SEQ ID NO: 74, SEQ ID NO: 134	hsa-miR-320c, hsa-miR-1913, hsa-miR-1274b, hsa-let-7d*, hsa-miR-378*	69%	83%	55%
L-165	SEQ ID NO: 815, SEQ ID NO: 74, SEQ ID NO: 134, SEQ ID NO: 430, SEQ ID NO: 22	hsa-miR-1274b, hsa-let-7d*, hsa-miR-378*, hsa-miR-21*, hsa-miR-1283	73%	77%	68%

L-166	SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3	hsa-miR-126, hsa-miR-423-5p, hsa-let-7i	78%	74%	82%
L-167	SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5	hsa-let-7i, hsa-let-7d, hsa-miR-22	48%	44%	53%
L-168	SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7	hsa-miR-22, hsa-miR-15a, hsa-miR-98	54%	56%	52%
L-169	SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9	hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p	65%	78%	52%
L-170	SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11	hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b	73%	72%	74%
L-171	SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13	hsa-miR-20b, hsa-miR-25, hsa-miR-195	74%	76%	71%
L-172	SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15	hsa-miR-195, hsa-let-7e, hsa-let-7c	58%	55%	61%
L-173	SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17	hsa-let-7c, hsa-let-7f, hsa-let-7a	50%	41%	59%
L-174	SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19	hsa-let-7a, hsa-let-7g, hsa-miR-140-3p	40%	41%	38%
L-175	SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21	hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p	68%	73%	63%
L-176	SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23	hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a*	74%	79%	69%
L-177	SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25	hsa-miR-18a*, hsa-miR-26b, hsa-miR-604	69%	67%	71%
L-178	SEQ ID NO: 25, SEQ ID NO: 27, SEQ ID NO: 29	hsa-miR-604, hsa-miR-93*, hsa-miR-1248	62%	69%	55%
L-179	SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29	hsa-miR-93*, hsa-miR-29a, hsa-miR-1248	65%	76%	54%
L-180	SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31	hsa-miR-1248, hsa-miR-210, hsa-miR-19b	62%	75%	49%
L-181	SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5	hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22	74%	70%	78%
L-182	SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7	hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98	52%	47%	58%

L-183	SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9	hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p	62%	69%	56%
L-184	SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10	hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p	67%	72%	63%
L-185	SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12	hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25	75%	73%	78%
L-186	SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14	hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e	76%	78%	75%
L-187	SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16	hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f	73%	75%	71%
L-188	SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19	hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p	49%	49%	49%
L-189	SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22	hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283	73%	80%	67%
L-190	SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25	hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a*, hsa-miR-26b, hsa-miR-604	72%	70%	74%
L-191	SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28	hsa-miR-18a*, hsa-miR-26b, hsa-miR-604, hsa-miR-423-3p, hsa-miR-93*, hsa-miR-29a	69%	67%	72%
L-192	SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31	hsa-miR-423-3p, hsa-miR-93*, hsa-miR-29a, hsa-miR-1248, hsa-miR-210, hsa-miR-19b	77%	78%	75%
L-193	SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33, SEQ ID NO: 34	hsa-miR-1248, hsa-miR-210, hsa-miR-19b, hsa-miR-453, hsa-miR-126*, hsa-miR-188-3p	64%	74%	54%

L-194	SEQ ID NO: 32, SEQ ID NO: 33, SEQ ID NO: 34, SEQ ID NO: 35, SEQ ID NO: 36, SEQ ID NO: 37	hsa-miR-453, hsa-miR-126*, hsa-miR-188-3p, hsa-miR-624*, hsa-miR-505*, hsa-miR-425	69%	78%	60%
L-195	SEQ ID NO: 35, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 38, SEQ ID NO: 39, SEQ ID NO: 40	hsa-miR-624*, hsa-miR-505*, hsa-miR-425, hsa-miR-339-3p, hsa-miR-668, hsa-miR-363*	72%	77%	68%
L-196	SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10	hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p	77%	74%	79%
L-197	SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16	hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f	79%	80%	77%
L-198	SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21	hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p	73%	77%	69%
L-199	SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26	hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a*, hsa-miR-26b, hsa-miR-604, hsa-miR-423-3p	76%	73%	80%
L-200	SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31	hsa-miR-1283, hsa-miR-18a*, hsa-miR-26b, hsa-miR-604, hsa-miR-423-3p, hsa-miR-93*, hsa-miR-29a, hsa-miR-1248, hsa-miR-210, hsa-miR-19b	77%	73%	82%

L-201	SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33, SEQ ID NO: 34, SEQ ID NO: 35, SEQ ID NO: 36	hsa-miR-93*, hsa-miR-29a, hsa-miR-1248, hsa-miR-210, hsa-miR-19b, hsa-miR-453, hsa-miR-126*, hsa-miR-188-3p, hsa-miR-624*, hsa-miR-505*	80%	83%	77%
L-202	SEQ ID NO: 32, SEQ ID NO: 33, SEQ ID NO: 34, SEQ ID NO: 35, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 38, SEQ ID NO: 39, SEQ ID NO: 40, SEQ ID NO: 41	hsa-miR-453, hsa-miR-126*, hsa-miR-188-3p, hsa-miR-624*, hsa-miR-505*, hsa-miR-425, hsa-miR-339-3p, hsa-miR-668, hsa-miR-363*, hsa-miR-15b*	73%	81%	65%
L-203	SEQ ID NO: 37, SEQ ID NO: 38, SEQ ID NO: 39, SEQ ID NO: 40, SEQ ID NO: 41, SEQ ID NO: 42, SEQ ID NO: 43, SEQ ID NO: 44, SEQ ID NO: 45, SEQ ID NO: 46	hsa-miR-425, hsa-miR-339-3p, hsa-miR-668, hsa-miR-363*, hsa-miR-15b*, hsa-miR-29c*, hsa-miR-550*, hsa-miR-34c-3p, hsa-miR-20a, hsa-miR-374a	73%	76%	69%
L-204	SEQ ID NO: 42, SEQ ID NO: 43, SEQ ID NO: 44, SEQ ID NO: 45, SEQ ID NO: 46, SEQ ID NO: 47, SEQ ID NO: 48, SEQ ID NO: 49, SEQ ID NO: 50, SEQ ID NO: 51	hsa-miR-29c*, hsa-miR-550*, hsa-miR-34c-3p, hsa-miR-20a, hsa-miR-374a, hsa-miR-145*, hsa-miR-302b, hsa-miR-106a, hsa-miR-30e, hsa-miR-223	70%	73%	68%
L-205	SEQ ID NO: 1, SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 7, SEQ ID NO: 9	hsa-miR-126, hsa-let-7i, hsa-miR-22, hsa-miR-98, hsa-miR-574-5p	72%	68%	76%
L-206	SEQ ID NO: 4, SEQ ID NO: 6, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12	hsa-let-7d, hsa-miR-15a, hsa-miR-19a, hsa-miR-324-3p, hsa-miR-25	64%	69%	60%
L-207	SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 14, SEQ ID NO: 16	hsa-miR-19a, hsa-miR-324-3p, hsa-miR-25, hsa-let-7e, hsa-let-7f	68%	74%	62%
L-208	SEQ ID NO: 21, SEQ ID NO: 118, SEQ ID NO: 1	hsa-miR-361-5p, hsa-miR-23b, hsa-miR-126	72%	79%	65%
L-209	SEQ ID NO: 1, SEQ ID NO: 838, SEQ ID NO: 28	hsa-miR-126, hsa-miR-527, hsa-miR-29a	77%	73%	82%
L-210	SEQ ID NO: 28, SEQ ID NO: 3, SEQ ID NO: 8	hsa-miR-29a, hsa-let-7i, hsa-miR-19a	56%	72%	39%

L-211	SEQ ID NO: 8, SEQ ID NO: 146, SEQ ID NO: 594	hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*	51%	64%	39%
L-212	SEQ ID NO: 594, SEQ ID NO: 147, SEQ ID NO: 529	hsa-miR-185*, hsa-miR-23a, hsa-miR-1914*	52%	54%	51%
L-213	SEQ ID NO: 529, SEQ ID NO: 409, SEQ ID NO: 36	hsa-miR-1914*, hsa-miR-29c, hsa-miR-505*	51%	49%	53%
L-214	SEQ ID NO: 36, SEQ ID NO: 4, SEQ ID NO: 139	hsa-miR-505*, hsa-let-7d, hsa-miR-378	49%	40%	58%
L-215	SEQ ID NO: 139, SEQ ID NO: 156, SEQ ID NO: 25	hsa-miR-378, hsa-miR-29b, hsa-miR-604	42%	37%	48%
L-216	SEQ ID NO: 25, SEQ ID NO: 5, SEQ ID NO: 53	hsa-miR-604, hsa-miR-22, hsa-let-7b	44%	44%	43%
L-217	SEQ ID NO: 53, SEQ ID NO: 663, SEQ ID NO: 26	hsa-let-7b, hsa-miR-299-3p, hsa-miR-423-3p	67%	68%	65%
L-218	SEQ ID NO: 26, SEQ ID NO: 23, SEQ ID NO: 687	hsa-miR-423-3p, hsa-miR-18a*, hsa-miR-1909	74%	75%	72%
L-219	SEQ ID NO: 687, SEQ ID NO: 15, SEQ ID NO: 6	hsa-miR-1909, hsa-let-7c, hsa-miR-15a	59%	57%	61%
L-220	SEQ ID NO: 6, SEQ ID NO: 27, SEQ ID NO: 50	hsa-miR-15a, hsa-miR-93*, hsa-miR-30e	61%	69%	52%
L-221	SEQ ID NO: 27, SEQ ID NO: 157, SEQ ID NO: 50	hsa-miR-93*, hsa-miR-665, hsa-miR-30e	63%	75%	52%
L-222	SEQ ID NO: 50, SEQ ID NO: 38, SEQ ID NO: 761	hsa-miR-30e, hsa-miR-339-3p, hsa-miR-1307	49%	54%	44%
L-223	SEQ ID NO: 21, SEQ ID NO: 118, SEQ ID NO: 1, SEQ ID NO: 838, SEQ ID NO: 28	hsa-miR-361-5p, hsa-miR-23b, hsa-miR-126, hsa-miR-527, hsa-miR-29a	76%	76%	76%
L-224	SEQ ID NO: 1, SEQ ID NO: 838, SEQ ID NO: 28, SEQ ID NO: 3, SEQ ID NO: 8	hsa-miR-126, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a	75%	69%	80%
L-225	SEQ ID NO: 28, SEQ ID NO: 3, SEQ ID NO: 8, SEQ ID NO: 146, SEQ ID NO: 594	hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*	46%	52%	40%

L-226	SEQ ID NO: 3, SEQ ID NO: 8, SEQ ID NO: 146, SEQ ID NO: 594, SEQ ID NO: 147	hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, hsa-miR-23a	58%	69%	47%
L-227	SEQ ID NO: 146, SEQ ID NO: 594, SEQ ID NO: 147, SEQ ID NO: 529, SEQ ID NO: 409	hsa-miR-28-5p, hsa-miR-185*, hsa-miR-23a, hsa-miR-1914*, hsa-miR-29c	54%	60%	47%
L-228	SEQ ID NO: 147, SEQ ID NO: 529, SEQ ID NO: 409, SEQ ID NO: 36, SEQ ID NO: 4	hsa-miR-23a, hsa-miR-1914*, hsa-miR-29c, hsa-miR-505*, hsa-let-7d	55%	62%	49%
L-229	SEQ ID NO: 529, SEQ ID NO: 409, SEQ ID NO: 36, SEQ ID NO: 4, SEQ ID NO: 139, SEQ ID NO: 156	hsa-miR-1914*, hsa-miR-29c, hsa-miR-505*, hsa-let-7d, hsa-miR-378, hsa-miR-29b	49%	45%	53%
L-230	SEQ ID NO: 4, SEQ ID NO: 139, SEQ ID NO: 156, SEQ ID NO: 25, SEQ ID NO: 5, SEQ ID NO: 53	hsa-let-7d, hsa-miR-378, hsa-miR-29b, hsa-miR-604, hsa-miR-22, hsa-let-7b	51%	46%	55%
L-231	SEQ ID NO: 25, SEQ ID NO: 5, SEQ ID NO: 53, SEQ ID NO: 663, SEQ ID NO: 26, SEQ ID NO: 23	hsa-miR-604, hsa-miR-22, hsa-let-7b, hsa-miR-299-3p, hsa-miR-423-3p, hsa-miR-18a*	68%	73%	63%
L-232	SEQ ID NO: 663, SEQ ID NO: 26, SEQ ID NO: 23, SEQ ID NO: 687, SEQ ID NO: 15, SEQ ID NO: 6	hsa-miR-299-3p, hsa-miR-423-3p, hsa-miR-18a*, hsa-miR-1909, hsa-let-7c, hsa-miR-15a	73%	75%	71%
L-233	SEQ ID NO: 687, SEQ ID NO: 15, SEQ ID NO: 6, SEQ ID NO: 37, SEQ ID NO: 27, SEQ ID NO: 157	hsa-miR-1909, hsa-let-7c, hsa-miR-15a, hsa-miR-425, hsa-miR-93*, hsa-miR-665	69%	75%	62%
L-234	SEQ ID NO: 37, SEQ ID NO: 27, SEQ ID NO: 157, SEQ ID NO: 50, SEQ ID NO: 38, SEQ ID NO: 761	hsa-miR-425, hsa-miR-93*, hsa-miR-665, hsa-miR-30e, hsa-miR-339-3p, hsa-miR-1307	60%	63%	56%
L-235	SEQ ID NO: 50, SEQ ID NO: 38, SEQ ID NO: 761, SEQ ID NO: 579, SEQ ID NO: 677, SEQ ID NO: 622	hsa-miR-30e, hsa-miR-339-3p, hsa-miR-1307, hsa-miR-625*, hsa-miR-193a-5p, hsa-miR-130b	62%	67%	57%
L-236	SEQ ID NO: 579, SEQ ID NO: 677, SEQ ID NO: 622, SEQ ID NO: 734, SEQ ID NO: 9, SEQ ID NO: 10	hsa-miR-625*, hsa-miR-193a-5p, hsa-miR-130b, hsa-miR-17*, hsa-miR-574-5p, hsa-miR-324-3p	77%	81%	73%

L-237	SEQ ID NO: 734, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 358, SEQ ID NO: 688, SEQ ID NO: 605	hsa-miR-17*, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-24, hsa-miR-629, hsa-miR-1323	70%	76%	63%
L-238	SEQ ID NO: 21, SEQ ID NO: 118, SEQ ID NO: 1, SEQ ID NO: 838, SEQ ID NO: 28, SEQ ID NO: 3, SEQ ID NO: 8, SEQ ID NO: 146, SEQ ID NO:≠594, SEQ ID NO: 147	hsa-miR-361-5p, hsa-miR-23b, hsa-miR-126, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, hsa-miR-23a	77%	82%	72%
L-239	SEQ ID NO: 3, SEQ ID NO: 8, SEQ ID NO: 146, SEQ ID NO: 594, SEQ ID NO: 147, SEQ ID NO: 529, SEQ ID NO: 409, SEQ ID NO: 36, SEQ ID NO: 4, SEQ ID NO: 139, SEQ ID NO: 156	hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, hsa-miR-23a, hsa-miR-1914*, hsa-miR-29c, hsa-miR-505*, hsa-let-7d, hsa-miR-378, hsa-miR-29b	55%	55%	54%
L-240	SEQ ID NO: 409, SEQ ID NO: 36, SEQ ID NO: 4, SEQ ID NO: 139, SEQ ID NO: 156, SEQ ID NO: 25, SEQ ID NO: 5, SEQ ID NO: 53, SEQ ID NO: 663, SEQ ID NO: 26	hsa-miR-29c, hsa-miR-505*, hsa-let-7d, hsa-miR-378, hsa-miR-29b, hsa-miR-604, hsa-miR-22, hsa-let-7b, hsa-miR-299-3p, hsa-miR-423-3p	60%	64%	56%
L-241	SEQ ID NO: 25, SEQ ID NO: 5, SEQ ID NO: 53, SEQ ID NO: 663, SEQ ID NO: 26, SEQ ID NO: 23, SEQ ID NO: 687, SEQ ID NO: 15, SEQ ID NO: 6, SEQ ID NO: 37	hsa-miR-604, hsa-miR-22, hsa-let-7b, hsa-miR-299-3p, hsa-miR-423-3p, hsa-miR-18a*, hsa-miR-1909, hsa-let-7c, hsa-miR-15a, hsa-miR-425	71%	71%	71%
L-242	SEQ ID NO: 23, SEQ ID NO: 687, SEQ ID NO: 15, SEQ ID NO: 6, SEQ ID NO: 37, SEQ ID NO: 27, SEQ ID NO: 157, SEQ ID NO: 50, SEQ ID NO: 38, SEQ ID NO: 761	hsa-miR-18a*, hsa-miR-1909, hsa-let-7c, hsa-miR-15a, hsa-miR-425, hsa-miR-93*, hsa-miR-665, hsa-miR-30e, hsa-miR-339-3p, hsa-miR-1307	75%	80%	70%
L-243	SEQ ID NO: 27, SEQ ID NO: 157, SEQ ID NO: 50, SEQ ID NO: 38, SEQ ID NO: 761, SEQ ID NO: 579, SEQ ID NO: 677, SEQ ID NO: 622, SEQ ID NO: 734, SEQ ID NO: 9	hsa-miR-93*, hsa-miR-665, hsa-miR-30e, hsa-miR-339-3p, hsa-miR-1307, hsa-miR-625*, hsa-miR-193a-5p, hsa-miR-130b, hsa-miR-17*, hsa-miR-574-5p	75%	78%	72%

L-244	SEQ ID NO: 579, SEQ ID NO: 677, SEQ ID NO: 622, SEQ ID NO: 734, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 358, SEQ ID NO: 688, SEQ ID NO: 605, SEQ ID NO: 18	hsa-miR-625*, hsa-miR-193a-5p, hsa-miR-130b, hsa-miR-17*, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-24, hsa-miR-629, hsa-miR-1323, hsa-let-7g	76%	83%	70%
L-245	SEQ ID NO: 10, SEQ ID NO: 358, SEQ ID NO: 688, SEQ ID NO: 605, SEQ ID NO: 18, SEQ ID NO: 77, SEQ ID NO: 131, SEQ ID NO: 196, SEQ ID NO: 731, SEQ ID NO: 109	hsa-miR-324-3p, hsa-miR-24, hsa-miR-629, hsa-miR-1323, hsa-let-7g, hsa-miR-1246, hsa-miR-215, hsa-miR-151-3p, hsa-miR-1471, hsa-miR-652	69%	74%	64%
L-246	SEQ ID NO: 77, SEQ ID NO: 131, SEQ ID NO: 196, SEQ ID NO: 731, SEQ ID NO: 109, SEQ ID NO: 41, SEQ ID NO: 30, SEQ ID NO: 20, SEQ ID NO: 11, SEQ ID NO: 716	hsa-miR-1246, hsa-miR-215, hsa-miR-151-3p, hsa-miR-1471, hsa-miR-652, hsa-miR-15b*, hsa-miR-210, hsa-miR-339-5p, hsa-miR-20b, hsa-miR-654-5p	69%	72%	65%
L-247	SEQ ID NO: 21, SEQ ID NO: 1, SEQ ID NO: 28, SEQ ID NO: 8, SEQ ID NO: 594	hsa-miR-361-5p, hsa-miR-126, hsa-miR-29a, hsa-miR-19a, hsa-miR-185*	72%	67%	76%
L-248	SEQ ID NO: 838, SEQ ID NO: 3, SEQ ID NO: 146, SEQ ID NO: 147, SEQ ID NO: 409	hsa-miR-527, hsa-let-7i, hsa-miR-28-5p, hsa-miR-23a, hsa-miR-29c	53%	65%	42%
L-249	SEQ ID NO: 146, SEQ ID NO: 147, SEQ ID NO: 409, SEQ ID NO: 4, SEQ ID NO: 156	hsa-miR-28-5p, hsa-miR-23a, hsa-miR-29c, hsa-let-7d, hsa-miR-29b	54%	58%	50%
L-250	SEQ ID NO: 75, SEQ ID NO: 26, SEQ ID NO: 21, SEQ ID NO: 31, SEQ ID NO: 97, SEQ ID NO: 74	hsa-miR-199a-5p, hsa-miR-423-3p, hsa-miR-361-5p, hsa-miR-361-5p, hsa-miR-19b, hsa-miR-331-3p, hsa-let-7d*	77%	81%	73%
L-251	SEQ ID NO: 622, SEQ ID NO: 26, SEQ ID NO: 21, SEQ ID NO: 719, SEQ ID NO: 677, SEQ ID NO: 134	hsa-miR-130b, hsa-miR-423-3p, hsa-miR-361-5p, hsa-miR-328, hsa-miR-193a-5p, hsa-miR-378*	77%	81%	72%

Figure 12

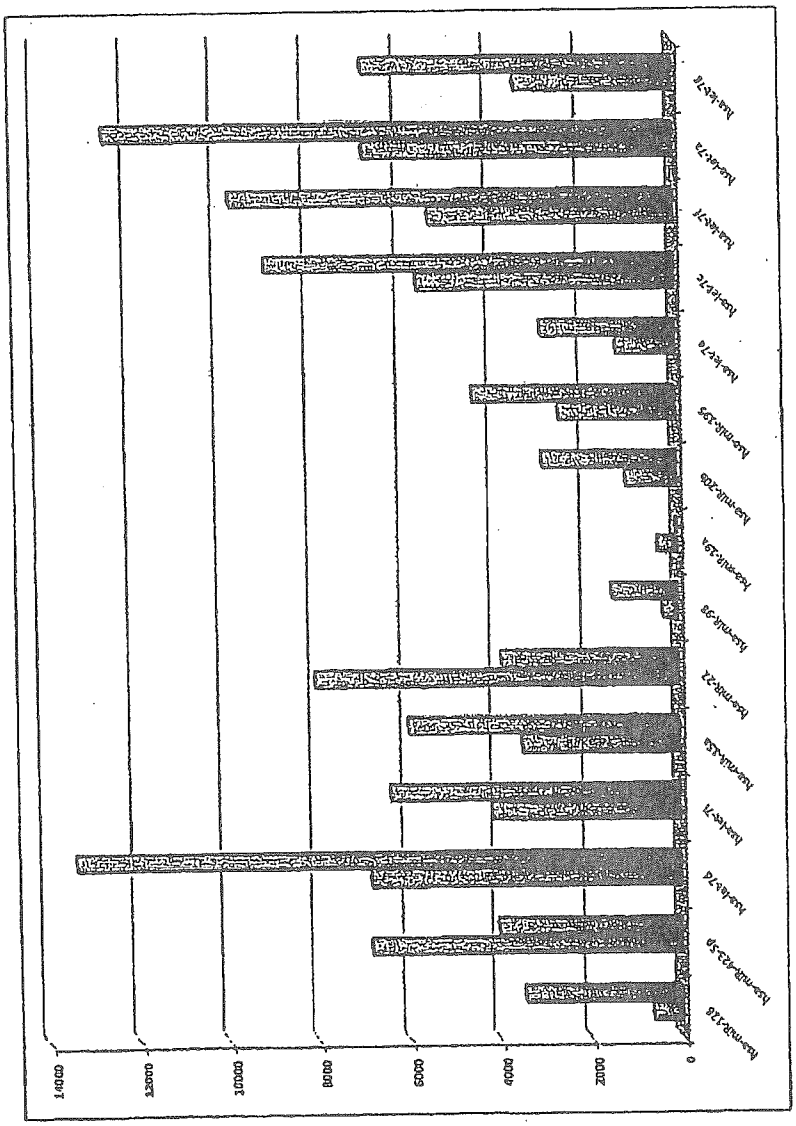


Figure 13A

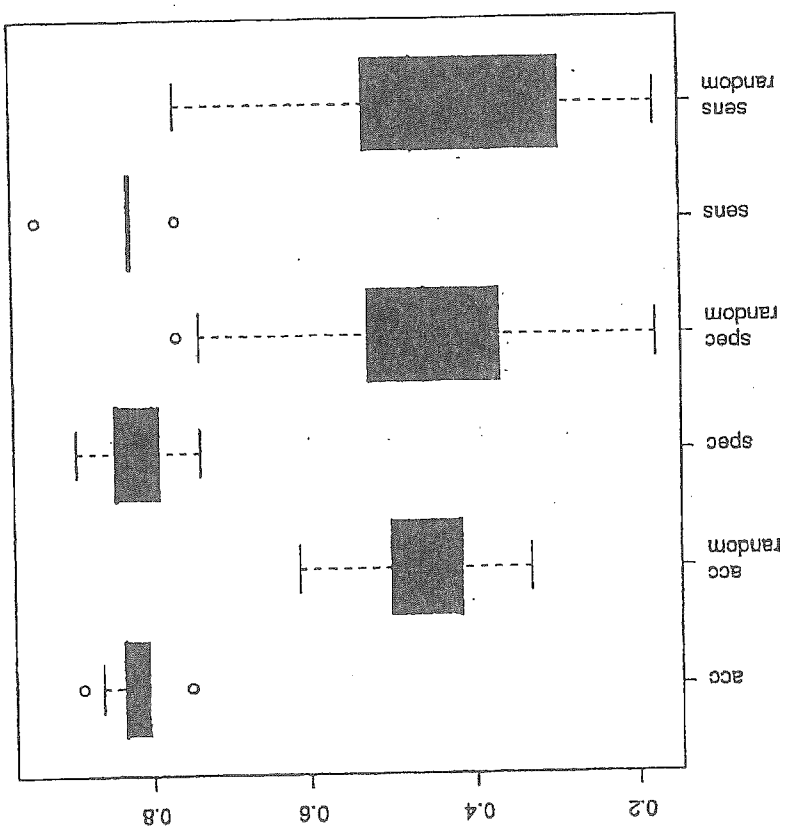

Results using 4 biomarkers
hsa-miR-126
hsa-miR-423-5p
hsa-let-7i
hsa-let-7d
sens random
sens
spec random
spec
acc random
acc
0.2
0.4
0.6
0.8

Figure 13B

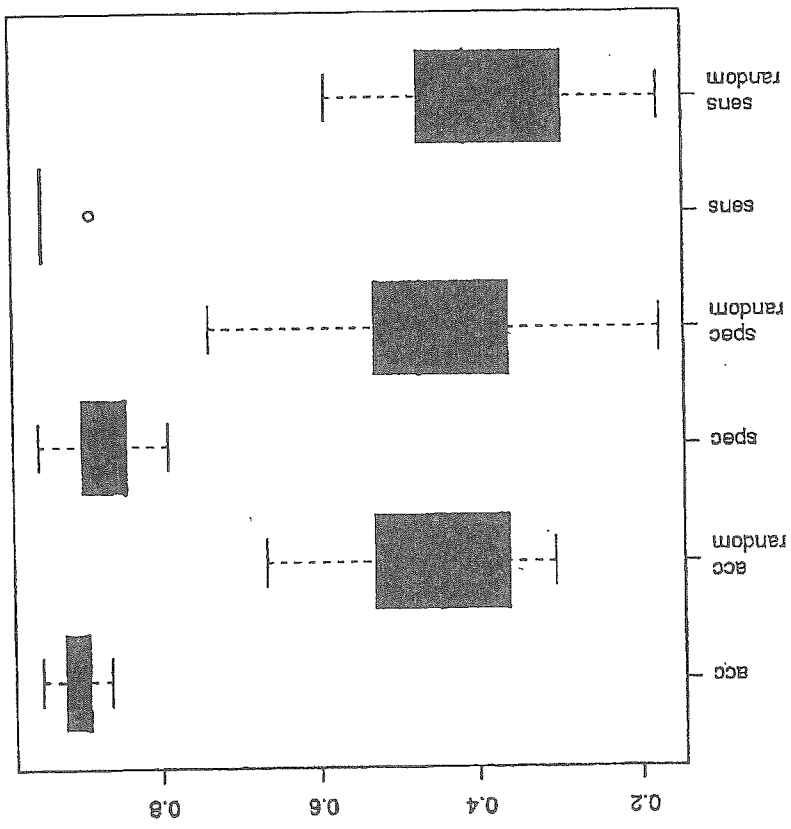

Results using 8 biomarkers
hsa-miR-126
hsa-miR-423-5p
hsa-let-7i
hsa-let-7d
hsa-miR-22
hsa-miR-15a
hsa-miR-98
hsa-miR-19a
0.2
0.4
0.6
0.8
acc
acc random
spec
spec random
sens
sens random

Figure 13C

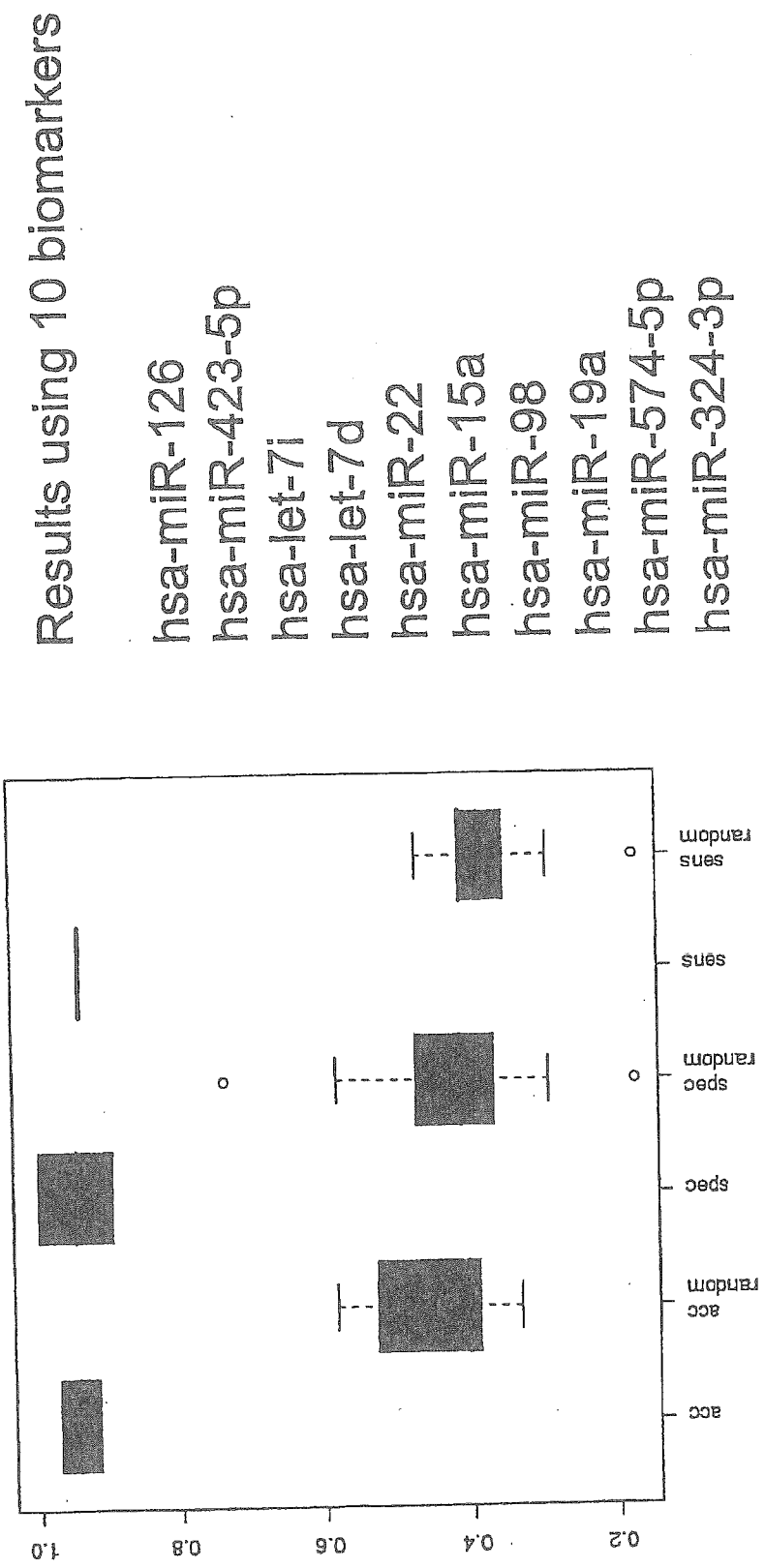

Results using 10 biomarkers
hsa-miR-126
hsa-miR-423-5p
hsa-let-7i
hsa-let-7d
hsa-miR-22
hsa-miR-15a
hsa-miR-98
hsa-miR-19a
hsa-miR-574-5p
hsa-miR-324-3p
1.0
0.8
0.6
0.4
0.2
acc
acc random
spec
spec random
sens
sens random

Figure 13D

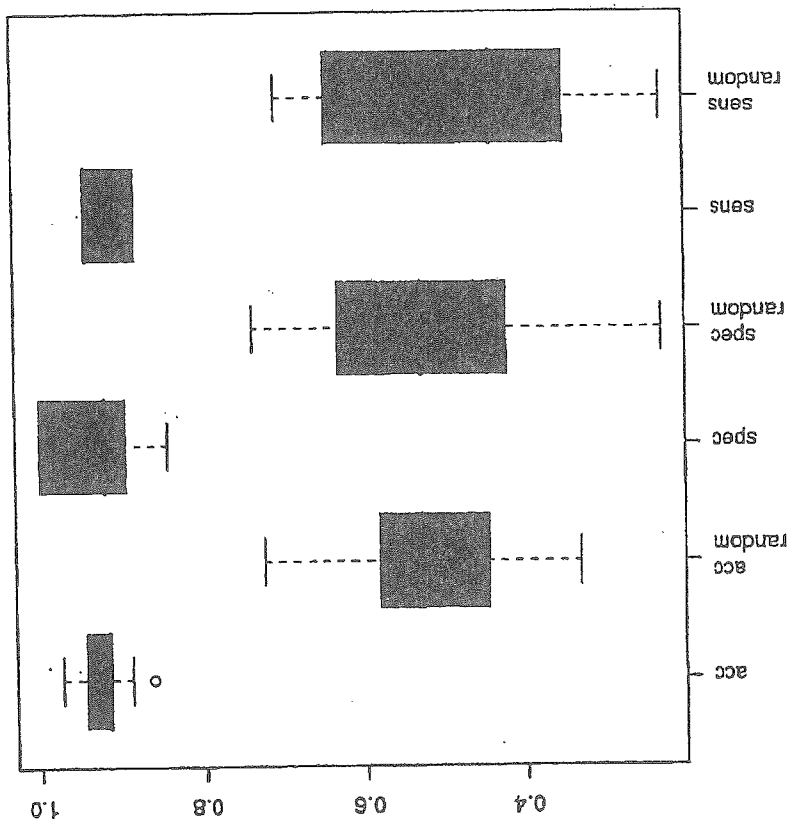

Results using 16 biomarkers
hsa-miR-126
hsa-miR-423-5p
hsa-let-7i
hsa-let-7d
hsa-miR-22
hsa-miR-15a
hsa-miR-98
hsa-miR-19a
hsa-miR-574-5p
hsa-miR-324-3p
hsa-miR-20b
hsa-miR-25
hsa-miR-195
hsa-let-7e
hsa-let-7c
hsa-let-7f
acc
acc random
spec
spec random
sens
sens random
0.4
0.6
0.8
1.0

Figure 13E

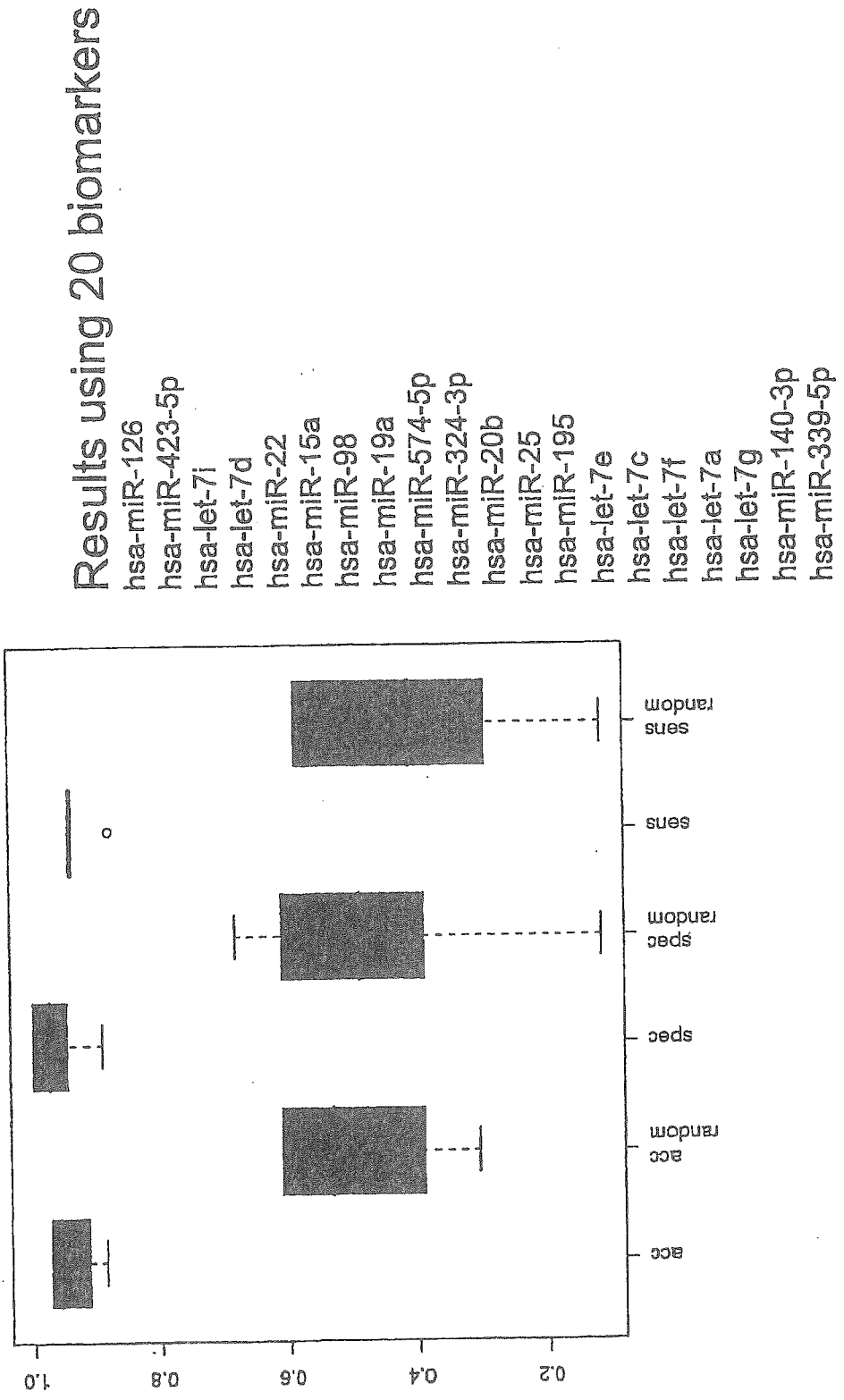

Results using 20 biomarkers
hsa-miR-126
hsa-miR-423-5p
hsa-let-7i
hsa-let-7d
hsa-miR-22
hsa-miR-15a
hsa-miR-98
hsa-miR-19a
hsa-miR-574-5p
hsa-miR-324-3p
hsa-miR-20b
hsa-miR-25
hsa-miR-195
hsa-let-7e
hsa-let-7c
hsa-let-7f
hsa-let-7a
hsa-let-7g
hsa-miR-140-3p
hsa-miR-339-5p
1.0
0.8
0.6
0.4
0.2
acc
acc random
spec
spec random
sens
sens random

Figure 13F

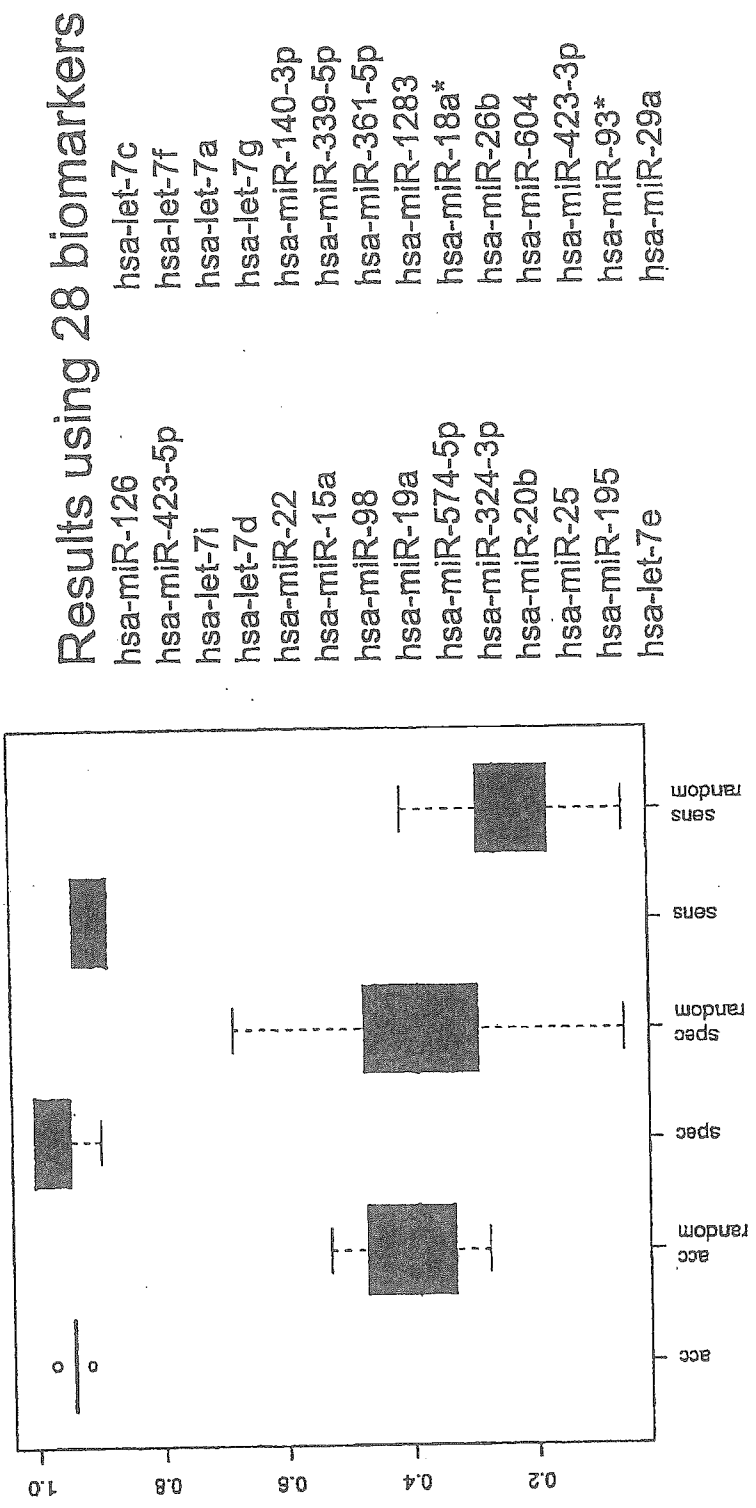
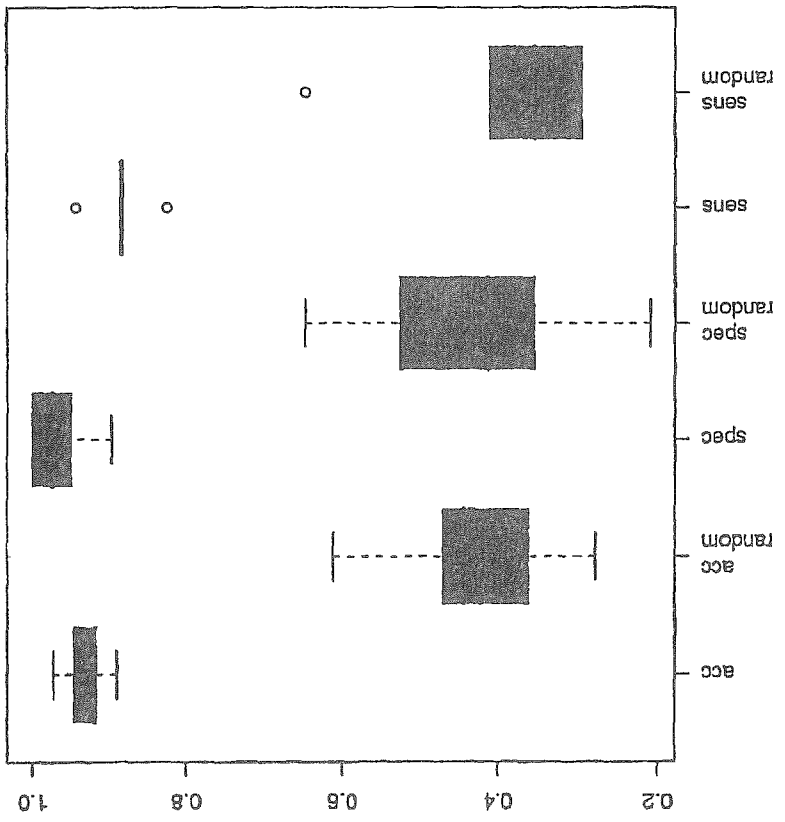

Results using 28 biomarkers
hsa-let-7c
hsa-let-7f
hsa-let-7a
hsa-let-7g
hsa-miR-140-3p
hsa-miR-339-5p
hsa-miR-361-5p
hsa-miR-1283
hsa-miR-18a*
hsa-miR-26b
hsa-miR-604
hsa-miR-423-3p
hsa-miR-93*
hsa-miR-29a
hsa-miR-126
hsa-miR-423-5p
hsa-let-7i
hsa-let-7d
hsa-miR-22
hsa-miR-15a
hsa-miR-98
hsa-miR-19a
hsa-miR-574-5p
hsa-miR-324-3p
hsa-miR-20b
hsa-miR-25
hsa-miR-195
hsa-let-7e
1.0
0.8
0.6
0.4
0.2
acc
acc random
spec
spec random
sens
sens random

Figure 13G



Results using 40 biomarkers

hsa-miR-126
hsa-miR-423-5p
hsa-let-7i
hsa-let-7d
hsa-miR-22
hsa-miR-15a
hsa-miR-98
hsa-miR-19a
hsa-miR-574-5p
hsa-miR-324-3p
hsa-miR-20b
hsa-miR-25
hsa-miR-195
hsa-let-7e
hsa-let-7c
hsa-let-7f
hsa-let-7a
hsa-let-7g
hsa-miR-140-3p
hsa-miR-339-5p
hsa-miR-361-5p
hsa-miR-1283
hsa-miR-18a*
hsa-miR-26b
hsa-miR-604
hsa-miR-423-3p
hsa-miR-93*
hsa-miR-29a
hsa-miR-1248
hsa-miR-210
hsa-miR-19b
hsa-miR-453
hsa-miR-126*
hsa-miR-188-3p
hsa-miR-624*
hsa-miR-505*
hsa-miR-425
hsa-miR-339-3p
hsa-miR-668
hsa-miR-363*

Figure 14

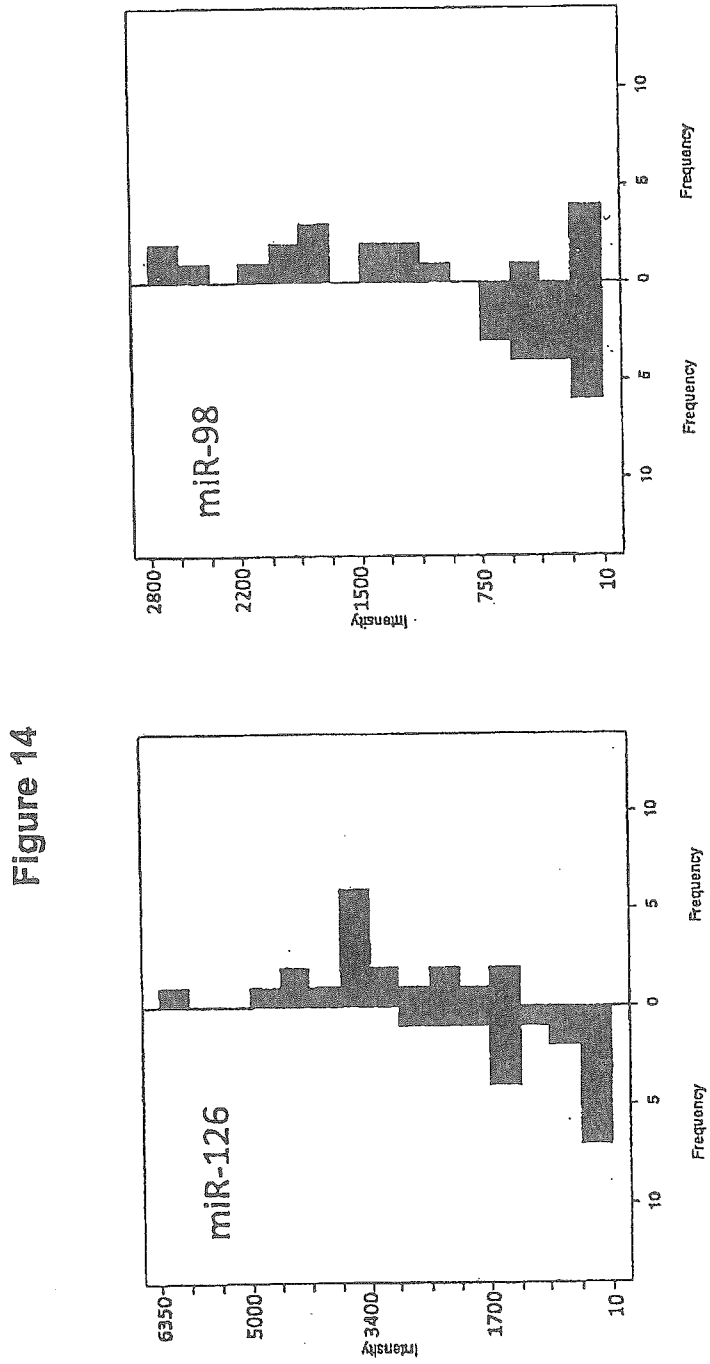

miR-98
Intensity
2800
2200
1500
750
10
Frequency
10
5
0
5
10
miR-126
Intensity
6350
5000
3400
1700
10
Frequency
10
5
0
5
10

Figure 15

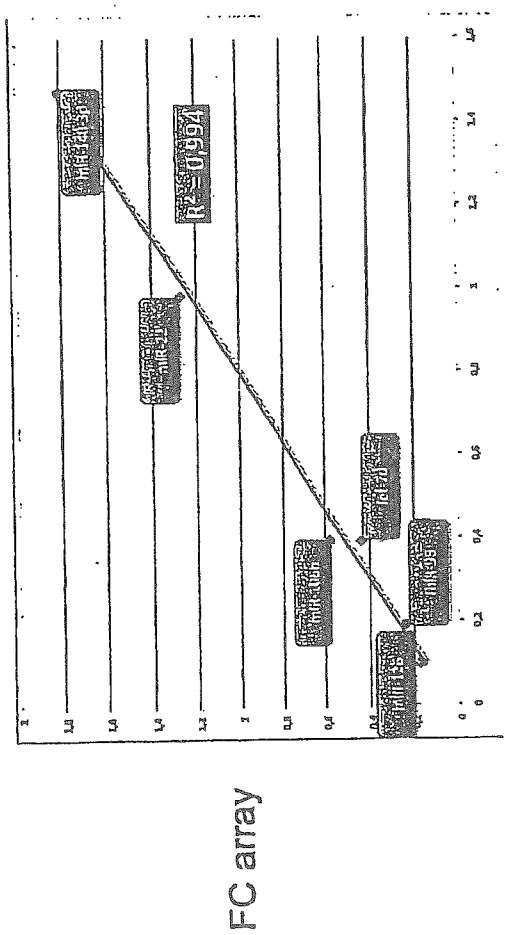


Figure 16

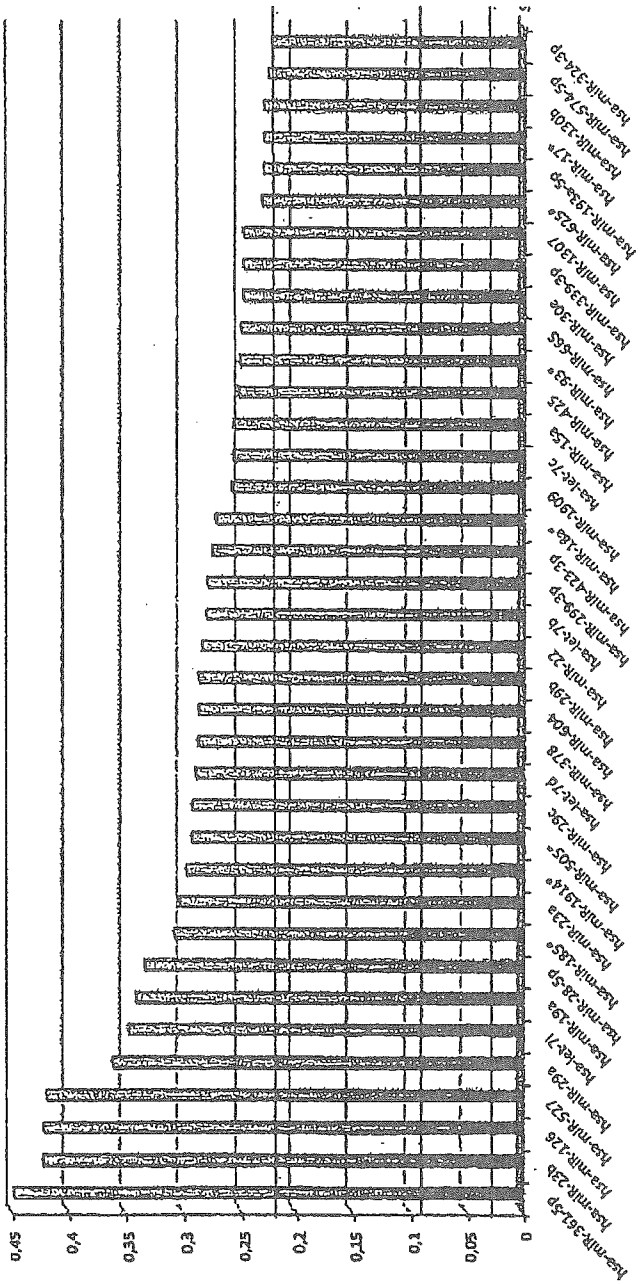
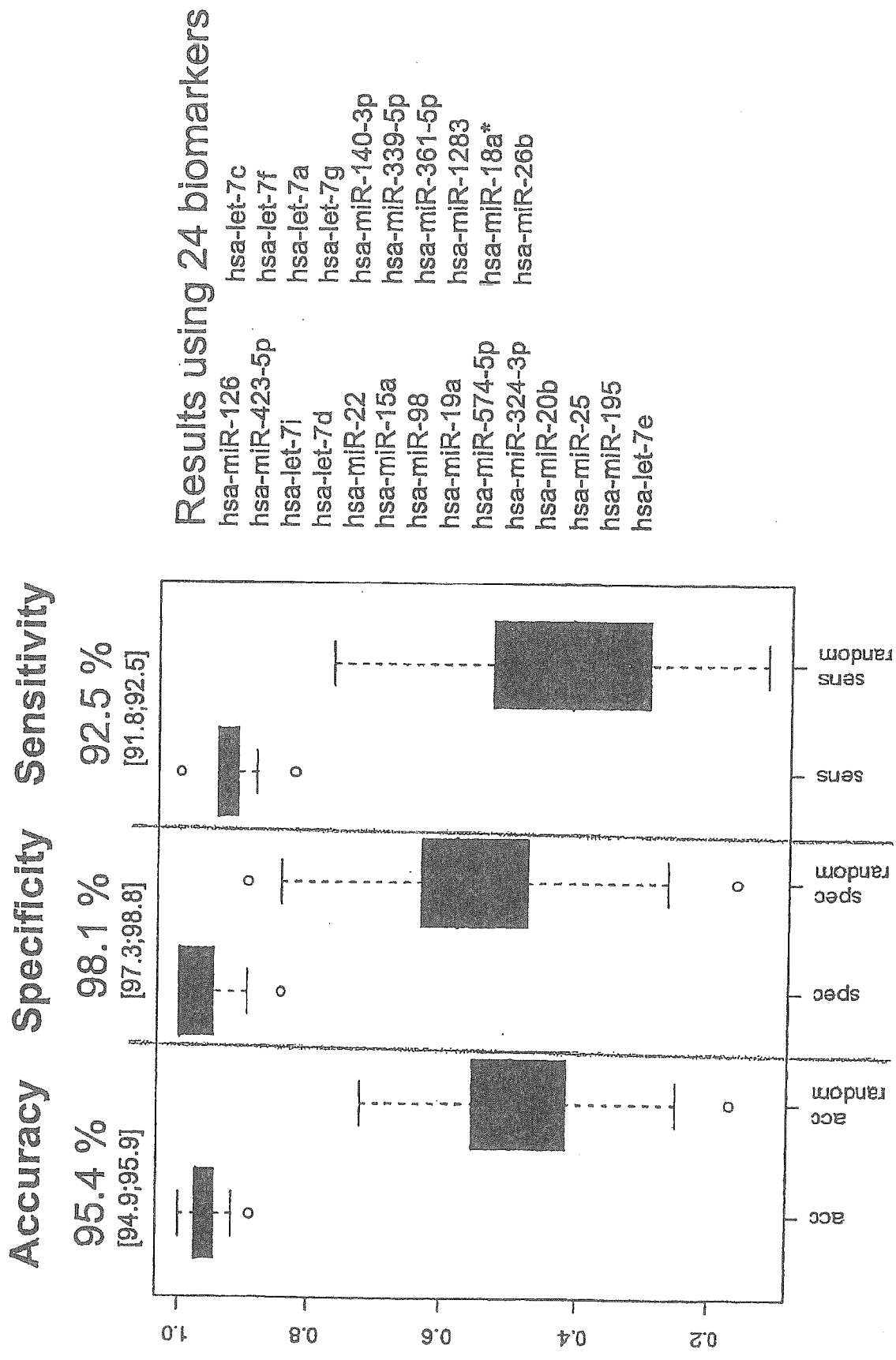

0,45
0,4
0,35
0,3
0,25
0,2
0,15
0,1
0,05
0
hsa-miR-361-5p
hsa-miR-29b
hsa-miR-126
hsa-miR-532
hsa-miR-29a
hsa-let-7i
hsa-miR-30a-5p
hsa-miR-28-5p
hsa-miR-185*
hsa-miR-23a
hsa-miR-191*
hsa-miR-505*
hsa-miR-29c*
hsa-let-7d
hsa-miR-378
hsa-miR-604
hsa-miR-29b
hsa-miR-22
hsa-let-7b
hsa-miR-299-3p
hsa-miR-423-3p
hsa-miR-148a*
hsa-miR-1909
hsa-let-7c
hsa-miR-152
hsa-miR-423
hsa-miR-33a*
hsa-miR-655
hsa-miR-30e
hsa-miR-338-3p
hsa-miR-1307
hsa-miR-625*
hsa-miR-1538-5p
hsa-miR-17*
hsa-miR-130b
hsa-miR-574-5p
hsa-miR-324-3p

Figure 17


Results using 24 biomarkers
hsa-miR-126
hsa-miR-423-5p
hsa-let-7i
hsa-let-7d
hsa-miR-22
hsa-miR-15a
hsa-miR-98
hsa-miR-19a
hsa-miR-574-5p
hsa-miR-324-3p
hsa-miR-20b
hsa-miR-25
hsa-miR-195
hsa-let-7e
hsa-let-7c
hsa-let-7f
hsa-let-7a
hsa-let-7g
hsa-miR-140-3p
hsa-miR-339-5p
hsa-miR-361-5p
hsa-miR-1283
hsa-miR-18a*
hsa-miR-26b
Accuracy
95.4 %
[94.9;95.9]
Specificity
98.1 %
[97.3;98.8]
Sensitivity
92.5 %
[91.8;92.5]
1.0
0.8
0.6
0.4
0.2
acc
random
spec
random
sens
random

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- WO 2009070653 A1 **[0005]**

Non-patent literature cited in the description

- **VORWERK S. et al.** Microfluidic-based enzymatic on-chip labeling of miRNAs. *N. Biotechnol.,* 20 August 2008, vol. 25 (2-3), 142-9 **[0043]**
- **ALVAREZ-GARCIA, I. ; E. A. MISKA.** MicroRNA functions in animal development and human disease. *Development,* 2005, vol. 132 (21), 4653-62 **[0062]**
- **BENJAMINI, Y. ; Y. HOCHBERG.** Controlling the false discovery rate: A practical and powerful approach to multiple testing. *J R Statist Soc B,* 1995, vol. 57, 289-300 **[0062]**
- **BOLSTAD, B. M. ; R. A. IRIZARRY et al.** A comparison of normalization methods for high density oligonucleotide array data based on variance and bias. *Bioinformatics,* 2003, vol. 19 (2), 185-93 **[0062]**
- **CALIN, G. A. ; C. M. CROCE.** MicroRNA-cancer connection: the beginning of a new tale. *Cancer Res,* 2006, vol. 66 (15), 7390-4 **[0062]**
- **CALIN, G. A. ; C. M. CROCE.** MicroRNA signatures in human cancers. *Nat Rev Cancer,* 2006, vol. 6 (11), 857-66 **[0062]**
- **CHEN, X. ; Y. BA et al.** Characterization of microRNAs in serum: a novel class of biomarkers for diagnosis of cancer and other diseases. *Cell Res,* 2008, vol. 18 (10), 997-1006 **[0062]**
- **CRAWFORD, M. ; E. BRAWNER et al.** MicroRNA-126 inhibits invasion in non-small cell lung carcinoma cell lines. *Biochem Biophys Res Commun,* 2008, vol. 373 (4), 607-12 **[0062]**
- **ESQUELA-KERSCHER, A. ; F. J. SLACK.** Oncomirs - microRNAs with a role in cancer. *Nat Rev Cancer,* 2006, vol. 6 (4), 259-69 **[0062]**
- **FEITELSON, M. A. ; J. LEE.** Hepatitis B virus integration, fragile sites, and hepatocarcinogenesis. *Cancer Lett,* 2007, vol. 252 (2), 157-70 **[0062]**
- **GILAD, S. ; E. MEIRI et al.** Serum microRNAs are promising novel biomarkers. *PLoS ONE,* 2008, vol. 3 (9), e3148 **[0062]**
- **GRIFFITHS-JONES, S. ; R. J. GROCOCK et al.** miRBase: microRNA sequences, targets and gene nomenclature. *Nucleic Acids Res,* 2006, vol. 34, D140-4 **[0062]**
- **GRIFFITHS-JONES, S. ; S. MOXON et al.** Rfam: annotating non-coding RNAs in complete genomes. *Nucleic Acids Res,* 2005, vol. 33, D121-4 **[0062]**
- **GRIFFITHS-JONES, S. ; H. K. SAINI et al.** miRBase: tools for microRNA genomics. *Nucleic Acids Res,* 2008, vol. 36, D154-8 **[0062]**
- **GUO, L. ; Z. X. HUANG et al.** Differential Expression Profiles of microRNAs in NIH3T3 Cells in Response to UVB Irradiation. *Photochem Photobiol.,* 2008 **[0062]**
- **HARRIS, T. A. ; M. YAMAKUCHI et al.** MicroRNA-126 regulates endothelial expression of vascular cell adhesion molecule 1. *Proc Natl Acad Sci USA,* 2008, vol. 105 (5), 1516-21 **[0062]**
- **HAYASHITA, Y. ; H. OSADA et al.** A polycistronic microRNA cluster, miR-17-92, is overexpressed in human lung cancers and enhances cell proliferation. *Cancer Res,* 2005, vol. 65 (21), 9628-32 **[0062]**
- **HE, L. ; J. M. THOMSON et al.** A microRNA polycistron as a potential human oncogene. *Nature,* 2005, vol. 435 (7043), 828-33 **[0062]**
- **HENSCHKE, C. I. ; D. F. YANKELEVITZ.** CT screening for lung cancer: update 2007. *Oncologist,* 2008, vol. 13 (1), 65-78 **[0062]**
- **HOCHBERG, Y.** A sharper bonferroni procedure for multiple tests of significance. *Biometrica,* 1988, vol. 75, 185-193 **[0062]**
- **ICHIMI, T. ; H. ENOKIDA et al.** Identification of novel microRNA targets based on microRNA signatures in bladder cancer. *Int J Cancer.,* 2009 **[0062]**
- **JEMAL, A. ; R. SIEGEL et al.** Cancer statistics, 2008. *CA Cancer J Clin,* 2008, vol. 58 (2), 71-96 **[0062]**
- **JOHNSON, S. M. ; H. GROSSHANS et al.** RAS is regulated by the let-7 microRNA family. *Cell,* 2005, vol. 120 (5), 635-47 **[0062]**
- **KELLER, A. ; N. LUDWIG et al.** A minimally invasive multiple marker approach allows highly efficient detection of meningioma tumors. *BMC Bioinformatics,* 2006, vol. 7, 539 **[0062]**
- **LEE, R. C. ; R. L. FEINBAUM et al.** The C. elegans heterochronic gene lin-4 encodes small RNAs with antisense complementarity to lin-14. *Cell,* 1993, vol. 75 (5), 843-54 **[0062]**
- **LU, J. ; G. GETZ et al.** MicroRNA expression profiles classify human cancers. *Nature,* 2005, vol. 435 (7043), 834-8 **[0062]**

- **MANN, H. ; F. WILCOXON.** On a test whether one of two random variables is stochastically larger than the other. *Ann Mat Stat,* 1947, vol. 18, 50-60 **[0062]**
- **SASSEN, S. ; E. A. MISKA et al.** MicroRNA: implications for cancer. *Virchows Arch,* 2008, vol. 452 (1), 1-10 **[0062]**
- Treatment of non-small cell lung cancer stage I and stage II: ACCP evidence-based clinical practice guidelines. **SCOTT, W. J. ; J. HOWINGTON et al.** Chest. 2007, vol. 132, 234S-242S **[0062]**
- **SHANNON, C.** A mathematical theory of communication. *The Bell System Technical Journal,* 1984, vol. 27, 623-656 **[0062]**
- **STAHLHUT ESPINOSA, C. E. ; F. J. SLACK.** The role of microRNAs in cancer. *Yale J Biol Med,* 2006, vol. 79 (3-4), 131-40 **[0062]**
- **TAKAMIZAWA, J. ; H. KONISHI et al.** Reduced expression of the let-7 microRNAs in human lung cancers in association with shortened postoperative survival. *Cancer Res,* 2004, vol. 64 (11), 3753-6 **[0062]**
- **TEAM, R. D. C.** R: A Language and Environment for Statistical Computing. R Foundation for Statistical Computing, 2008 **[0062]**
- **TONG, A. W.** Small RNAs and non-small cell lung cancer. *Curr Mol Med,* 2006, vol. 6 (3), 339-49 **[0062]**
- **VAPNIK, V.** The Nature of Statistical Learning Theory. Springer, 2000 **[0062]**
- **VOLINIA, S. ; G. A. CALIN et al.** A microRNA expression signature of human solid tumors defines cancer gene targets. *Proc Natl Acad Sci USA,* 2006, vol. 103 (7), 2257-61 **[0062]**
- **VORWERK, S. ; K. GANTER et al.** Microfluidic-based enzymatic on-chip labeling of miRNAs. *N Biotechnol,* 2008, vol. 25 (2-3), 142-9 **[0062]**
- **WILCOXON, F.** Individual comparisons by ranking methods. *Biometric Bull,* 1945, vol. 1, 80-83 **[0062]**
- **WILLIAMS, A. E.** Functional aspects of animal microRNAs. *Cell Mol Life Sci,* 2008, vol. 65 (4), 545-62 **[0062]**
- **YANAIHARA, N. ; N. CAPLEN et al.** Unique microRNA molecular profiles in lung cancer diagnosis and prognosis. *Cancer Cell,* 2006, vol. 9 (3), 189-98 **[0062]**
- **ZHANG, B. ; X. PAN et al.** microRNAs as oncogenes and tumor suppressors. *Dev Biol,* 2007, vol. 302 (1), 1-12 **[0062]**
- **ZHANG, B. ; Q. WANG et al.** MicroRNAs and their regulatory roles in animals and plants. *J Cell Physiol,* 2007, vol. 210 (2), 279-89 **[0062]**

MIRNS-UJJLENYOMAT TÜDŐRÁK DIAGNOSZTIZÁLÁSÁRA

Szabadalmi igénypontok

1. Eljárás tüdőrák diagnosztizálására, ahol az magában foglalja a következő lépéseket:

   (a) egy miRNS-ekből álló előre meghatározott készlet egy expressziós profiljának a meghatározása egy páciensből származó biológiai mintában; és

   (b) a nevezett expressziós profilnak az összehasonlítása egy referencia expressziós profillal,

   ahol a nevezett meghatározott expressziós profilnak a nevezett referencia expressziós profillal történő összehasonlítása által lehetővé van téve a tüdőráknak a diagnosztizálása, és

   ahol a nevezett biológiai minta egy vérsejt-minta perifériás eritrocitákból, leukocitákból és trombocitákból.

2. Eljárás az 1. igénypont szerint, ahol az (a) lépésben az miRNS-expresszió az összes olyan RNS alapján van meghatározva, amely egy perifériás vérmintának a vérsejtjeiből van kivonva.

3. Eljárás az 1. vagy 2. igénypont szerint, ahol a diagnosztizálás magában foglalja a rák típusának, fokozatának és/vagy stádiumának a meghatározását.

4. Eljárás az 1.-től 3.-ig igénypontok bármelyike szerint, ahol a diagnosztizálás magában foglalja a túlélési aránynak, a gyógyszerek iránti válaszkészségnek a meghatározását, és/vagy a betegség vagy a terápia, például kemoterápia, lefolyásának a felügyeletét, a betegség stádiumának a meghatározását, egy páciens által a terápiás beavatkozásra adott válasznak a mérését, a betegségtől szenvedő páciensek csoportokra osztását (szegmentálását), egy olyan páciens azonosítását, amelynél fennáll a kockázat a betegség kifejlődésére, a betegség megjelenésének, előnyösen a megjelenés súlyosságának, az előrejelzése/becslése, egy a betegségtől szenvedő páciens által a terápiás beavatkozásra adott válasznak az előrejelzése.

5. Eljárás az 1.-től 4.-ig igénypontok bármelyike szerint, ahol a tüdőrák a következőkből álló csoportból van választva: tüdő karcionoid tumor, tüdő pleurális mezotelióma (mesothelioma) és tüdő pikkelysejtes (laphámsejtes) karcinóma, különösen nem-kissejtes tüdőkarcinóma.

6. Eljárás az 1.-től 5.-ig igénypontok bármelyike szerint, ahol a nevezett, miRNS-ekből álló előre meghatározott készlet tartalmaz egy vagy több olyan miRNS-t, amelyről ismert, hogy differenciáltan van expresszálva a betegségi állapotban, amelyet diagnosztizálni kell.

7. Eljárás az 1.-től 6.-ig igénypontok bármelyike szerint, ahol egy expressziós profilnak a meghatározása az (a) lépésben magában foglalja a következőket: nukleinsav-hibridizáció, nukleinsav-amplifikáció, polimeráz-hosszabbítás (polimeráz-extenzió), szekvenálás, tömegspektroszkópia vagy azok bármelyik kombinációja, ahol a nukleinsav-hibridizáció különösen egy szilárd fázisú nukleinsav bio-lapka-tömb (biochip-array), különösen egy mikrotömb (microarray), egy gyöngy-alapú vizsgálat vagy in sitú (helyben történő) hibrodizáció alkalmazásával van megvalósítva, vagy ahol a nukleinsav-amplifikációra szolgáló eljárás egy valósidejű PCR (RT-PCR).

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8. Eljárás az 1.-től 7.-ig igénypontok bármelyike szerint, ahol a nevezett, miRNS-ekből álló előre meghatározott készlet tartalmaz egy vagy több nukleinsavat, amely a következőkből álló csoportból van választva: (a) hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a*, hsa-miR-26b, hsa-miR-604, hsa-miR-423-3p és hsa-miR-93*, vagy ahol a nevezett, miRNS-ekből álló előre meghatározott készlet tartalmaz egy vagy több nukleinsavat, amely a következőkből álló csoportból van választva: (b) hsa-miR-361-5p, hsa-miR-23b, hsa-miR-126, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, hsa-miR-23a, hsa-miR-1914*, hsa-miR-29c, hsa-miR-505*, hsa-let-7d, hsa-miR-378, hsa-miR-29b, hsa-miR-604, hsa-miR-29b, hsa-let-7b, hsa-miR-299-3p, hsa-miR-423-3p, hsa-miR-18a*, hsa-miR-1909, hsa-let-7c, hsa-miR-15a, hsa-miR-425, hsa-miR-93*, hsa-miR-665, hsa-miR-30e, hsa-miR-339-3p, hsa-miR-1307, hsa-miR-625*, hsa-miR-193a-5p, hsa-miR-130b, hsa-miR-17*, hsa-miR-574-5p és hsa-miR-324-3p.

9. Eljárás a 8. igénypont szerint, ahol a nevezett, miRNS-ekből álló előre meghatározott készlet tartalmaz legalább 7 miRNS-t, előnyösen legalább 10, 15, 20 vagy 24 miRNS-t, különösen az először megnevezett miRNS-eket, és leginkább különösen a megadott miRNS-ek közül mindegyiket.

10. Eljárás a 8.-tól 9.-ig igénypontok bármelyike szerint, ahol a nevezett, miRNS-ekből álló előre meghatározott készlet tartalmazza legalább a következő miRNS-eket: hsa-miR-126, hsa-miR-361-5p, hsa-miR-23b, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, és hsa-miR-23a, vagy ahol a nevezett, miRNS-ekből álló előre meghatározott készlet tartalmazza legalább a következő miRNS-eket: hsa-miR-361-5p, hsa-miR-23b, hsa-miR-126, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, hsa-miR-23a, hsa-miR-1914*, hsa-miR-505*, hsa-miR-29c, hsa-let-7d, hsa-miR-378, és hsa-miR-604, vagy ahol a nevezett, miRNS-ekből álló előre meghatározott készlet tartalmazza a következő nukleinsavakat: hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a* és hsa-miR-26b.

11. Eljárás az 1.-től 10.-ig igénypontok bármelyike szerint, ahol az miRNS-ekből álló előre meghatározott készlet tartalmaz legalább 7, 10, 15 vagy 20 miRNS-t, előnyösen a megadott miRNS-ek közül mindegyiket, különösen legalább 1-et, 7-et, 10-et, 15-öt, 20-at, 25-öt, 30-at, 35-öt, 40-et, 50-et, 75-öt, 100-at az miRNS-ek közül, amelyek a 11A. ábrán szerepelő miRNS-ek közül vannak választva, és/vagy legalább egy miRNS-molekulát vagy miRNS-molekula lenyomatot (angolul: „signature of miRNA molecules"), amelyek a 11B. ábrán vagy 17. ábrán vannak bemutatva.

12. Egy készlet alkalmazása az 1.-től 11.-ig igénypontok szerinti eljárásnak megfelelően tüdőrák diagnosztizálására, ahol a készlet a következőket tartalmazza:

    (a) eszközöket egy miRNS-ekből álló előre meghatározott készlet egy expressziós profiljának a meghatározására egy páciensből származó biológiai mintában; és

    (b) a nevezett, miRNS-ekből álló előre meghatározott készlet egy referencia expressziós profilját egy egészséges alanyból származó biológiai mintában.

    ahol a biológiai minta egy vérsejt-minta perifériás eritrocitákból, leukocitákból és trombocitákból.

13. Alkalmazás a 12. igénypont szerint, ahol a készlet tartalmaz eszközöket egy vagy több miRNS meghatározására, amely a következőkből álló csoportból van választva: (a) hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a*, hsa-miR-26b, hsa-miR-604, hsa-miR-423-3p és hsa-miR-93, vagy tartalmaz eszközöket egy vagy több miRNS meghatározására, amely a következőkből álló csoportból van választva: (b) hsa-miR-361-5p, hsa-miR-23b, hsa-miR-126, hsa-miR-527, hsa-miR-29a, hsa-let-7i, hsa-miR-19a, hsa-miR-28-5p, hsa-miR-185*, hsa-miR-23a, hsa-miR-1914*, hsa-miR-29c, hsa-miR-505*, hsa-let-7d, hsa-miR-378, hsa-miR-29b, hsa-miR-604, hsa-miR-29b, hsa-let-7b, hsa-miR-299-3p, hsa-miR-423-3p, hsa-miR-18a*, hsa-miR-1909, hsa-let-7c, hsa-miR-15a, hsa-miR-425, hsa-miR-93*, hsa-miR-665, hsa-miR-30e, hsa-miR-339-3p, hsa-miR-1307, hsa-miR-625*, hsa-miR-193a-5p, hsa-miR-130b, hsa-miR-17*, hsa-miR-574-5p és hsa-miR-324-3p.

14. Alkalmazás a 12.-től 13.-ig igénypontok bármelyike szerint, ahol a készlet tartalmaz eszközöket a következő miRNS-ek meghatározására: hsa-miR-126, hsa-miR-423-5p, hsa-let-7i, hsa-let-7d, hsa-miR-22, hsa-miR-15a, hsa-miR-98, hsa-miR-19a, hsa-miR-574-5p, hsa-miR-324-3p, hsa-miR-20b, hsa-miR-25, hsa-miR-195, hsa-let-7e, hsa-let-7c, hsa-let-7f, hsa-let-7a, hsa-let-7g, hsa-miR-140-3p, hsa-miR-339-5p, hsa-miR-361-5p, hsa-miR-1283, hsa-miR-18a* és hsa-miR-26b.

15. Egy oligonukleotidokból és polinukleotidokból álló készlet alkalmazása tüdőrák diagnosztizálására, ahol az oligonukleotidokból és polinukleotidokból álló készlet tartalmazza a 8.-tól 14.-ig igénypontok bármelyike szerinti, egy miRNS-ekből álló készletnek a szekvenciáit és/vagy azoknak a komplementjeit.