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(54) Title: IDENTIFICATION OF RAC1B AS A MARKER AND MEDIATOR OF MATRIX METALLOPROTEINASE-INDUCED MALIGNANCY

(57) Abstract: The present invention provides compositions and methods for detecting MMP-induced malignancies by detecting Rac1b expression. The invention further provides compositions and *in vitro* and *in vivo* methods for inhibiting MMP-induced malignant transformation by modulating Rac1b expression and/or function.



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## INTERNATIONAL SEARCH REPORT

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<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC: A61K 31/715( 2007.01);39/395( 2007.01);C12Q 1/68( 2007.01);G01N 33/574( 2007.01);C07H 21/04( 2007.01)  USPC: 514/44;424/130.1,141.1,146.1,155.1;435/6,7.23;536/24.5 According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>  Minimum documentation searched (classification system followed by classification symbols) U.S. : 514/44; 424/130.1, 141.1, 146.1, 155.1; 435/ 6, 7.23; 536/24.5  Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) STN, WEST		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	SINGH, A., et al, Rac1b, a tumor associated, constitutively active Rac1 splice variant, promotes cellular transformation, Oncogene, December 2004, Vol. 23, pages 9369-9380, see page 9377, column 1, last paragraph.	1-4
A	SCHNELZER A., et al, Rac1 in human breast cancer: overexpression, mutation analysis, and characterization of a new isoform, Rac1b, Oncogene 2000, Vol. 19, pages 3013-3020, see page 3018, column 1, lines 18-25.	15-23
X	JORDAN P., et al, Cloning of a novel Rac1b splice variant with increased expression in colorectal tumors, Oncogene, 1999, Vol. 18, pages 6835-6839, see entire document.	15-19
Y	US 5474796 A (BRENNAN) 12 December 1995, see entire document especially column 9, lines 48-55.	24
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
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Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201		Authorized officer Richard Schnizer, Ph. D. Telephone No. 571-272-0500