

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
20 July 2006 (20.07.2006)

PCT

(10) International Publication Number
WO 2006/076584 A3

(51) International Patent Classification:

G01N 33/574 (2006.01) **C07K 16/00** (2006.01)
A61K 39/395 (2006.01)

(21) International Application Number:

PCT/US2006/001245

(22) International Filing Date: 12 January 2006 (12.01.2006)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/643,757 12 January 2005 (12.01.2005) US

(71) Applicant (for all designated States except US): **RAVEN BIOTECHNOLOGIES, INC.** [US/US]; BRITANNIA OYSTER POINT, 1140 Veterans Blvd., South San Francisco, California 94080 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MATHER, Jennie, P.** [US/US]; 269 La Prenda Drive, Millbrae, California 94030 (US). **LOO, Deryk, T.** [CA/US]; 1509 Pine Knoll Drive, Belmont, California 94402 (US).

(74) Agents: **ZHOU, Jie** et al.; MORRISON & FOERSTER LLP, 755 Page Mill Road, Palo Alto, California 94304-1018 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:

8 February 2007

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: KID31 AND ANTIBODIES THAT BIND THERETO

(57) Abstract: The invention provides the identification and characterization of disease and cancer-associated antigen, KID31. The invention also provides a family of monoclonal antibodies that bind to antigen KID31, methods of diagnosing and treating various human cancers and diseases that express KID31.



WO 2006/076584 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US06/01245

A. CLASSIFICATION OF SUBJECT MATTER

IPC: G01N 33/574(2006.01);A61K 39/395(2006.01);C07K 16/00(2006.01)

USPC: 435/7.23;424/141.1,146.1;530/388.26,388.8

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/7.23; 424/141.1,146.1; 530/388.26,388.8; 424/130.1

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)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	Rehli, M. et al. Carboxypeptidase M is Identical to the MAX.1 Antigen and Its Expression is Associated with Monocyte to Macrophage Differentiation. June 30, 1995, Vol. 270. No. 26. pages 15644-15649. Abstract and p. 15647, Fig. 3 and Table II.	1, 2, 12, 13, 22-25 ----- 3-9, 11
X --- Y	de Saint-Vis B. et al. Distribution of Carboxypeptidase M on Lymphoid and Myeloid Cells Parallel the Other Zinc-Dependent Proteases CD10 and CD13. Blood. August 1, 1995, Vol 86. No. 3, pages 1098-1105. Abstract, Table 1, pages 1100-1101	1, 2, 12, 13, 22-25 ----- 3-9,11
A	KRAUSE, S.W. et al. Carboxypeptidase M as a Marker of Macrophage Maturation. Immunological Reviews. February 1998, Vol 161, pages 119-127.	1, 2, 12, 13, 22-25



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

30 August 2006 (30.08.2006)

Date of mailing of the international search report

12 DEC 2006

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

Jeffrey Siew

Telephone No. (703) 308-0196

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US06/01245

Continuation of B. FIELDS SEARCHED Item 3:

Pub Med STN Search terms: carboxypeptidase M, kid 31, max.1, monoclonal antibody, cancer, tumor, tumour, neoplasm, carcinogen, Mather, JP, Andreessen-R, PTA 6516