

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization

International Bureau

(43) International Publication Date
01 February 2018 (01.02.2018)



(10) International Publication Number
WO 2018/021972 A1

(51) International Patent Classification:

A61K 39/395 (2006.01) G01N 33/577 (2006.01)
C07K 16/28 (2006.01) A61P 35/00 (2006.01)

(21) International Application Number:

PCT/SG2017/050382

(22) International Filing Date:

26 July 2017 (26.07.2017)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10201606178X 26 July 2016 (26.07.2016) SG

(71) Applicant: AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH [SG/SG]; 1 Fusionopolis Way, #20-10 Connexis North Tower, Singapore 138632 (SG).

(72) Inventors: CUA, Simeon; c/o Bioprocessing Technology Institute, 20 Biopolis Way, Centros #06-01, Singapore 138668 (SG). CHOO, Andre Boon Hwa; c/o Bioprocessing Technology Institute, 20 Biopolis Way, Centros #06-01, Singapore 138668 (SG). TAN, Heng Liang; c/o Bioprocessing Technology Institute, 20 Biopolis Way, Centros #06-01, Singapore 138668 (SG). FONG, Wey Jia; c/o Bioprocessing Technology Institute, 20 Biopolis Way, Centros #06-01, Singapore 138668 (SG). DING, Vanessa Mei Yee; c/o Bioprocessing Technology Institute, 20 Biopolis Way, Centros #06-01, Singapore 138668 (SG). LEONG, Leonard Wen Yan; c/o Bioprocessing Technology Institute, 20 Biopolis Way, Centros #06-01, Singapore 138668 (SG).

(74) Agent: SPRUSON & FERGUSON (ASIA) PTE LTD; P.O. Box 1531, Robinson Road Post Office, Singapore 903031 (SG).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ,

OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

— with international search report (Art. 21(3))
— with sequence listing part of description (Rule 5.2(a))

(54) Title: ANTI-ANNEXIN A2 MONOCLONAL ANTIBODIES

(57) Abstract: The present invention relates to an antigen-binding protein, preferably a monoclonal antibody, against annexin A2 (ANXA2), comprising (i) a heavy chain variable domain comprising a VHCDR1 of sequence GYSITSGYSWH, a VHCDR2 of sequence YIHYSGSTKYNPSLKS and a VHCDR3 of sequence GSNYGFDY; and (ii) a light chain variable domain comprising a VLCDR1 of sequence KSSQSLLYSNDQKNYLA, a VLCDR2 of sequence WASIRES, and a VLCDR3 of sequence QQYYIYPLT. Also provided is an ANXA2 binding protein comprising (i) a heavy chain variable domain comprising a VHCDR1 of sequence VYSITSGYSWH; a VHCDR2 of sequence YIHYSGSTKYNPSLKS, and a VHCDR3 of sequence GTDNAVDY; and (ii) a light chain variable domain comprising a VLCDR1 of sequence KSSQSLLYSNDQKNYLA, a VLCDR2 of sequence WASSRES, and a VLCDR3 of sequence QQYYIYPLT. The antibodies preferably bind to an N-linked glycan on ANXA2, and are internalised upon binding. They may be conjugated with cytotoxins and may be used in the treatment or detection of cancer.



WO 2018/021972 A1