

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
10 November 2022 (10.11.2022)



(10) International Publication Number
WO 2022/235662 A1

(51) International Patent Classification:

A61K 39/00 (2006.01) C07K 16/30 (2006.01)
C07K 14/725 (2006.01) C07K 16/28 (2006.01)

(21) International Application Number:

PCT/US2022/027463

(22) International Filing Date:

03 May 2022 (03.05.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/184,183 04 May 2021 (04.05.2021) US
63/239,293 31 August 2021 (31.08.2021) US

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(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, IQ, IR, IS, IT, JM, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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).

(54) Title: CHIMERIC ANTIGEN RECEPTORS WITH MAGE-A4 SPECIFICITY AND USES THEREOF

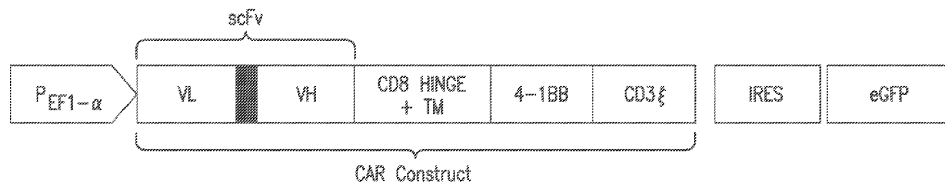


FIG. 1

(57) Abstract: MAGE-A4, or Melanoma-Associated Antigen A4, is a cancer-testis antigen (CTA) on the X chromosome. The present disclosure provides MAGE-A4-specific chimeric antigen receptors, cells expressing such chimeric antigen receptors, and MAGE-A4 specific isolated antibodies. In certain embodiments, engineered cells expressing the chimeric antigen receptors of the present disclosure are capable of inhibiting the growth of tumors expressing MAGE-A4. The engineered cells of the present disclosure are useful for the treatment of diseases and disorders in which an upregulated or induced MAGE-A4-targeted immune response is desired and/or therapeutically beneficial. For example, engineered cells expressing the MAGE-A4-specific chimeric antigen receptors of the present disclosure are useful for the treatment of various cancers.

[Continued on next page]

Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

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