

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
20 March 2025 (20.03.2025)



(10) International Publication Number
WO 2025/056659 A1

(51) International Patent Classification:

C07K 14/705 (2006.01) C07K 14/725 (2006.01)
A61K 35/17 (2015.01) C07K 16/28 (2006.01)
A61K 39/00 (2006.01)

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, ME, 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).

(21) International Application Number:

PCT/EP2024/075464

(22) International Filing Date:

12 September 2024 (12.09.2024)

Published:

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

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

23197818.0 15 September 2023 (15.09.2023) EP

(71) Applicant: **MEDIGENE IMMUNOTHERAPIES GMBH** [DE/DE]; Lochhamer Strasse 11, 82152 Planegg-Martinsried (DE).

(72) Inventors: **LONGINOTTI, Giulia**; Christrosenweg 8, 81377 München (DE). **CATARINELLA, Mario**; Niederhiedernstr. 9, 81375 München (DE). **DAVARI, Kathrin**; Ulmenstr. 14, 82362 Weilheim (DE). **SALVERMOSER, Melanie**; Richard-Wagner-Weg 4, 82178 Puchheim (DE).

(74) Agent: **WEINZIERL, Gerhard** et al.; c/o Schiweck Weinzierl Koch, Ganghoferstrasse 68b, 80339 Munich (DE).

(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, CV, 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, MG, MK, MN, MU, 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, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST,

(54) Title: T-CELL RECEPTOR VARIANT AGAINST mKRAS₇₋₁₆ G12V AND G12C

(57) Abstract: The present invention relates to a TCR polypeptide complex and/or a combination comprising a novel TCR characterized by its CDR sequences of the α chain variable region and the β chain variable region and by its antigenic specificity to (a) particular mutated KRAS epitope(s) or a fragment thereof presented in the context of a MHC class I molecule. The present invention further relates to a nucleic acid, a vector as well as a host cell comprising said nucleic acid or said vector. The present invention relates to a method for obtaining said TCR and said chimeric co-stimulatory receptor and to a pharmaceutical or diagnostic composition comprising the abovementioned. The present invention further relates to the abovementioned for use as a medicament or for use in a method of diagnosing, detecting, preventing, and/or treating cancer. Furthermore, the present invention relates to a method of detecting the presence of a cancer in a subject in vitro, by applying within said method the abovementioned, and the use of the abovementioned for generating modified lymphocytes and a kit.

WO 2025/056659 A1