



- (51) **International Patent Classification:**
A61K 45/06 (2006.01) *A61K 39/00* (2006.01)
C07K 14/82 (2006.01)
- (21) **International Application Number:**
PCT/US2015/062269
- (22) **International Filing Date:**
24 November 2015 (24.11.2015)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
62/084,654 26 November 2014 (26.11.2014) US
62/171,321 5 June 2015 (05.06.2015) US
- (71) **Applicant:** THE UNITED STATES OF AMERICA, as represented by THE SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES [US/US]; Office of Technology Transfer, National Institutes of Health, 6011 Executive Boulevard, Suite 325, MSC 7660, Bethesda, Maryland 20892-7660 (US).
- (72) **Inventors:** WANG, Qiong J.; 12431 Ansin Circle Drive, Potomac, Maryland 20854 (US). YU, Zhiya; 9916 Bedfordshire Ct, Potomac, Maryland 20854 (US). YANG, James C.; 5305 Roosevelt Street, Bethesda, Maryland 20814 (US).
- (74) **Agent:** LAWLEY, Stephanie M.; Leydig, Voit & Mayer, Two Prudential Plaza, Suite 4900, 180 North Stetson Avenue, Chicago, Illinois 60601 (US).
- (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, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, 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).
- Published:**
- with international search report (Art. 21(3))
 - with sequence listing part of description (Rule 5.2(a))

(54) **Title:** ANTI-MUTATED KRAS T CELL RECEPTORS

(57) **Abstract:** Disclosed is an isolated or purified T cell receptor (TCR) having antigenic specificity for an HLA-A11-restricted epitope of mutated Kirsten rat sarcoma viral oncogene homolog (KRAS) (KRAS⁷⁻¹⁶), Neuroblastoma RAS Viral (V-Ras) Oncogene Homolog (NRAS), or Harvey Rat Sarcoma Viral Oncogene Homolog (HRAS). Related polypeptides and proteins, as well as related nucleic acids, recombinant expression vectors, host cells, populations of cells, and pharmaceutical compositions are also provided. Also disclosed are methods of detecting the presence of cancer in a mammal and methods of treating or preventing cancer in a mammal.

