

(51) International Patent Classification:
C07K 14/705 (2006.01)(21) International Application Number:
PCT/US2015/049126(22) International Filing Date:
9 September 2015 (09.09.2015)

(25) Filing Language: English

(26) Publication Language: English

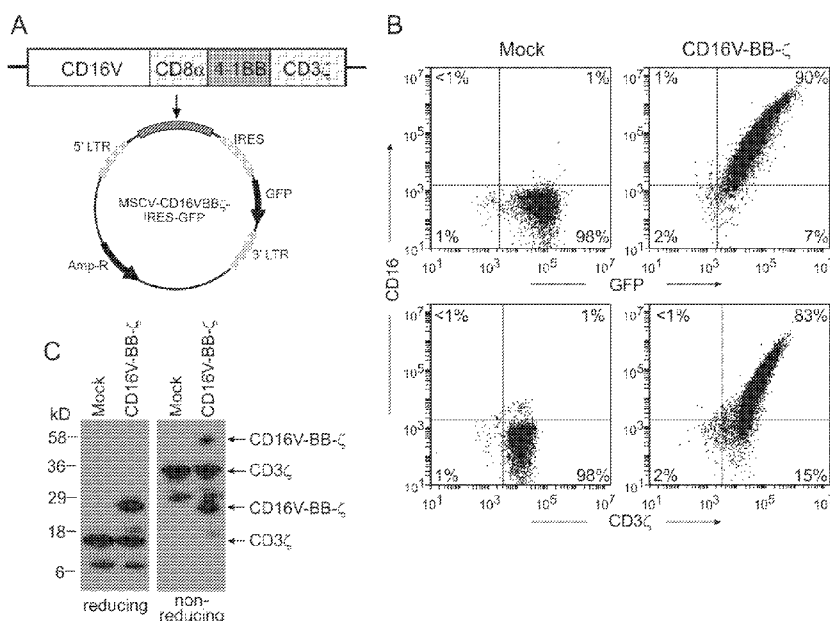
(30) Priority Data:
62/047,916 9 September 2014 (09.09.2014) US(71) Applicant: UNUM THERAPEUTICS [US/US]; One
Broadway, 4th Floor, Cambridge, MA 02142 (US).(72) Inventors: WILSON, Charles; One Broadway, 4th Floor,
Cambridge, MA 02142 (US). MCGINNESS, Kathleen;
700 Main Street, Cambridge, MA 02139 (US).(74) Agent: CHEN, Yahua; Wolf, Greenfield & Sacks, P.C.,
600 Atlantic Avenue, Boston, MA 02210-2206 (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: CHIMERIC RECEPTORS AND USES THEREOF IN IMMUNE THERAPY

FIGURE 1



(57) Abstract: Disclosed herein are chimeric receptors comprising an extracellular domain with affinity and specific for the Fc portion of an immunoglobulin molecule (Ig), an Fc-binding domain; a transmembrane domain; at least one co-stimulatory signaling domain; and a cytoplasmic signaling domain comprising an immunoreceptor tyrosine-based activation motif (ITAM). Also provided herein are nucleic acids encoding such chimeric receptors and immune cells expressing the chimeric receptors. Such immune cells can be used to enhance antibody-dependent cell-mediated cytotoxicity and/or to enhance antibody-based immunotherapy, such as cancer immunotherapy.