



PCT

(51) International Patent Classification:
C12N 15/85 (2006.01) *C07K 16/46* (2006.01)
A01K 67/027 (2006.01)

(21) International Application Number:
PCT/US2011/023971

(22) International Filing Date:
8 February 2011 (08.02.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/302,282 8 February 2010 (08.02.2010) US

(71) Applicant (for all designated States except US): **REGENERON PHARMACEUTICALS, INC.** [US/US]; 777 Old Saw Mill River Road, Tarrytown, NY 10591 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MCWHIRTER, John** [US/US]; 2035 Crescent Dr., Tarrytown, NY 10591 (US). **MACDONALD, Lynn** [US/US]; 16 Gedney Way, White Plains, NY 10605 (US). **STEVENS, Sean** [US/US]; 355 Berry Street, #413, San Francisco, CA 94158 (US). **DAVIS, Samuel** [US/US]; 332 West 88th Street, Apt. B2, New York, NY 10024 (US). **MURPHY, Andrew, J.** [US/US]; 10 Newton Court, Croton-on-hudson, NY 10520 (US).

(74) Agents: **POBURSKY, Kevin, J** et al.; Regeneron Pharmaceuticals, INC., 777 Old Saw Mill River Road, Tarrytown, NY 10591 (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, 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, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, 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, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, 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: COMMON LIGHT CHAIN MOUSE

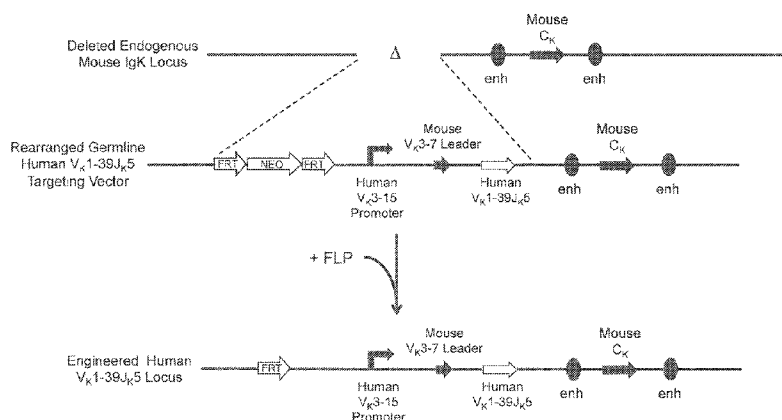


Figure 1

(57) Abstract: A genetically modified mouse is provided, wherein the mouse is incapable of rearranging and expressing an endogenous mouse immunoglobulin light chain variable sequence, wherein the mouse expresses only one or two human light chain variable domains encoded by human immunoglobulin sequences operably linked to the mouse kappa (K) constant gene at the endogenous mouse K locus, wherein the mouse expresses a reverse chimeric antibody having a light chain variable domain derived from one of only two human light chain variable region gene segments and a mouse K constant domain, and a human heavy chain variable domain and a mouse heavy chain constant domain, from an endogenous mouse heavy chain locus. Bispecific epitope-binding proteins that are fully human are provided, comprising two different heavy chains that associate with an identical light chain that comprises a variable domain derived from one of two different human light chain variable region gene segments.