

(51) International Patent Classification:
A01K 67/027 (2006.01)(21) International Application Number:
PCT/US2015/033024(22) International Filing Date:
28 May 2015 (28.05.2015)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/005,476 30 May 2014 (30.05.2014) US
62/051,626 17 September 2014 (17.09.2014) US
62/072,692 30 October 2014 (30.10.2014) US(71) Applicant: **REGENERON PHARMACEUTICALS, INC.** [US/US]; 777 Old Saw Mill River Road, Tarrytown, NY 10591 (US).(72) Inventors: **KYRATSOUS, Christos**; C/o Regeneron Pharmaceuticals, Inc., 777 Old Saw Mill River Road, Tarrytown, NY 10591 (US). **MUJICA, Alexander**; c/o Regeneron Pharmaceuticals, Inc., 777 Old Saw Mill River Road, Tarrytown, NY 10591 (US).(74) Agents: **SHIEH-NEWTON, Terri** et al.; Mintz Levin Cohn Ferris Glovsky and Popeo, P.C., 44 Montgomery Street, 36th Floor, San Francisco, CA 94104 (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.

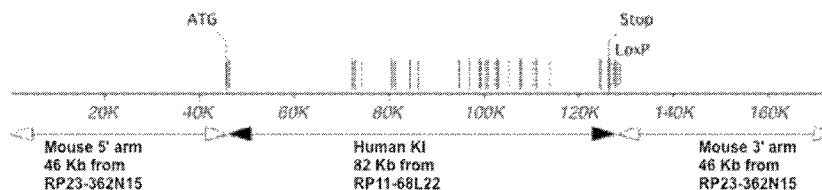
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, 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))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(54) Title: HUMANIZED DIPEPTIDYL PEPTIDASE IV (DPP4) ANIMALS

FIG. 1B



(57) **Abstract:** Non-human animals comprising a human or humanized *DPP4* nucleic acid sequence are provided. Non-human animals that comprise a replacement of the endogenous *Dpp4* gene with a human or humanized *DPP4* gene, or non-human animals comprising a human or humanized *DPP4* gene in addition to the endogenous *Dpp4* gene are described. Non-human animals comprising a human or humanized *DPP4* gene under control of human or non-human *DPP4* regulatory elements is also provided, including non-human animals that have a replacement of non-human *Dpp4*-encoding sequence with human *DPP4*-encoding sequence at an endogenous non-human *Dpp4* locus. Non-human animals comprising human or humanized *DPP4* gene sequences, wherein the non-human animals are rodents, e.g., mice or rats, are provided. Methods for making and using the non-human animals are described.