



(51) International Patent Classification:

C07K 16/28 (2006.01) A61P 37/02 (2006.01)

A61P 35/00 (2006.01) A61K 39/00 (2006.01)

(21) International Application Number:

PCT/EP2021/085810

(22) International Filing Date:

15 December 2021 (15.12.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

20214951.4 17 December 2020 (17.12.2020) EP

21203272.6 18 October 2021 (18.10.2021) EP

(71) Applicant (for all designated States except US): **F. HOFFMANN-LA ROCHE AG** [CH/CH]; Grenzacherstrasse 124, 4070 Basel (CH).

(71) Applicant (for US only): **HOFFMANN-LA ROCHE INC.** [US/US]; Great Notch, 150 Clove Road, 8th Floor, Suite 8 - Legal Department, Little Falls, New Jersey 07424 (US).

(72) Inventors: **BUJOTZEK, Alexander**; c/o Roche Diagnostics GmbH, Nonnenwald 2, 82377 Penzberg (DE). **CARPY**

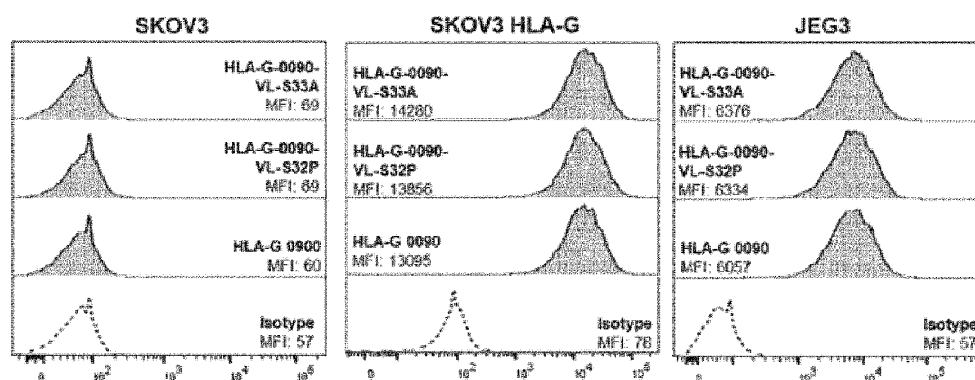
GUTIERREZ CIRLOS, Alejandro; c/o Roche Diagnostics GmbH, Nonnenwald 2, 82377 Penzberg (DE). **FREIMOSER-GRUNDSCHÖBER, Anne**; c/o Roche Glycart AG, Wagistrasse 10, 8952 Schlieren (CH). **HAGE, Carina**; c/o Roche Diagnostics GmbH, Nonnenwald 2, 82377 Penzberg (DE). **HOFER, Thomas**; c/o Roche Glycart AG, Wagistrasse 10, 8952 Schlieren (CH). **KIRCHNER, Silke**; c/o Roche Diagnostics GmbH, Nonnenwald 2, 82377 Penzberg (DE). **MAJETY, Meher**; c/o Roche Diagnostics GmbH Nonnenwald 2, 82377 Penzberg (DE). **MOESSNER, Ekkehard**; c/o Roche Glycart AG, Wagistrasse 10, 8952 Schlieren (CH). **NEUMANN, Christiane**; c/o Roche Glycart AG, Wagistrasse 10, 8952 Schlieren (CH). **SPICK, Christian**; c/o Roche Diagnostics GmbH, Nonnenwald 2, 82377 Penzberg (DE). **TIEFENTHALER, Georg**; c/o Roche Diagnostics GmbH, Nonnenwald 2, 82377 Penzberg (DE). **WEINDL, Thomas**; c/o Roche Diagnostics GmbH, Nonnenwald 2, 82377 Penzberg (DE).

(74) Agent: **JENNI, Wolfgang**; Roche Diagnostics GmbH, Patent Department, Nonnenwald 2, 82377 Penzberg (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, CZ, DE, DJ, DK, DM, DO,

(54) Title: ANTI-HLA-G ANTIBODIES AND USE THEREOF

Fig. 5



(57) Abstract: The present invention relates antibodies that bind to human HLA-G, multispecific antibodies thereof, their preparation, formulations and methods of using the same. In particular, specific variants of the antibody designated HLA-G-0090 are provided with mutations in the CDR1 of the variable region of the light chain (CDR-L1) which comprises a potential glycosylation site (NSS). Two particular variants showed improved binding properties, good expressability and stability, while showing no more N-glycosylation at the CDR-L1 of the light chain (so no Fab glycosylation could be detected). In one embodiment bispecific antibodies are disclosed comprising the variants for the HLA-G antibody and an antibody binding human CD3.

[Continued on next page]

DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN, KP, KR, KW, 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, 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, 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))
- in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE