



- (51) **International Patent Classification:**
C12N 9/10 (2006.01) *C12N 15/85* (2006.01)
- (21) **International Application Number:**
PCT/US2024/040056
- (22) **International Filing Date:**
29 July 2024 (29.07.2024)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
63/516,653 31 July 2023 (31.07.2023) US
- (71) **Applicant:** SIGMA-ALDRICH CO. LLC [US/US]; 3050 Spruce Street, St. Louis, Missouri 63103 (US).
- (72) **Inventors:** MAHON, James; c/o Sigma-Aldrich Co. LLC, 3050 Spruce Street, St. Louis, Missouri 63103 (US). RAVELLETTE, James; c/o Sigma-Aldrich Co. LLC, 3050 Spruce Street, St. Louis, Missouri 63103 (US). RAZAFSKY, David; c/o Sigma-Aldrich Co. LLC, 3050 Spruce Street, St. Louis, Missouri 63103 (US). GUSTIN, Jason A.; c/o Sigma-Aldrich Co. LLC, 3050 Spruce Street, St. Louis, Missouri 63103 (US). BORGSCHULTE, Trissa; c/o Sigma-Aldrich Co. LLC, 3050 Spruce Street, St. Louis, Missouri 63103 (US).
- (74) **Agent:** KASTEN, Daniel et al.; Sigma-Aldrich Co. LLC, c/o EMD Millipore Corporation, Patent Department, 400 Summit Drive, Burlington, Massachusetts 01803 (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, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, 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, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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, ME, 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).

(54) **Title:** METABOLIC SELECTION VIA THE ALANINE BIOSYNTHESIS PATHWAY

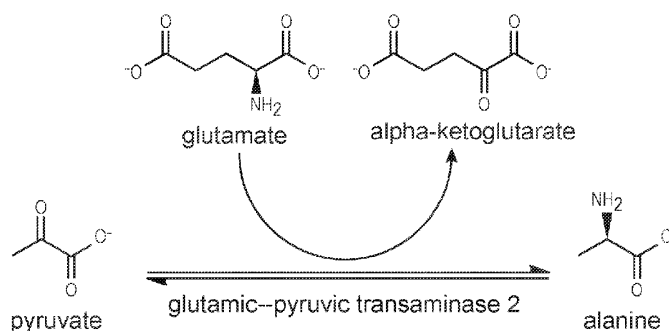


FIG. 1

(57) **Abstract:** The present disclosure provides an isolated mammalian cell comprising a reduced or eliminated expression of Glutamic-Pyruvic Transaminase 2 (GPT2). Further provided are methods for preparing such cells and methods for using such cells for the production of recombinant proteins.

[Continued on next page]

Published:

- with international search report (Art. 21(3))
- with sequence listing part of description (Rule 5.2(a))