

(51) International Patent Classification:

C12Q 1/37 (2006.01) C12N 9/50 (2006.01)

C12N 9/10 (2006.01)

(21) International Application Number:

PCT/US2014/049805

(22) International Filing Date:

5 August 2014 (05.08.2014)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/862,363 5 August 2013 (05.08.2013) US

61/987,518 2 May 2014 (02.05.2014) US

(71) Applicant: GREENLIGHT BIOSCIENCES, INC.

[US/US]; 200 Boston Avenue, Suite 3100, Medford, MA 02155 (US).

(72) Inventors: BLAKE, William, Jeremy; 30 Mayflower

Road, Winchester, MA 01890 (US). CUNNINGHAM,

Drew, S.; 82 Clifton Street, Cambridge, MA 02140 (US).

(74) Agent: BAKER, C., Hunter; 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, LT, 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, 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))

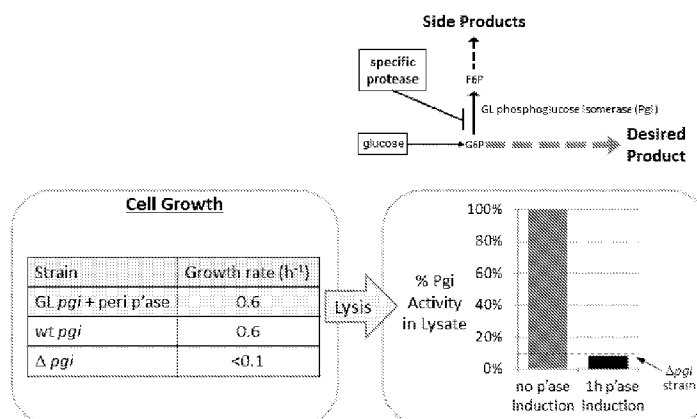
— with sequence listing part of description (Rule 5.2(a))

(88) Date of publication of the international search report:

16 April 2015

(54) Title: ENGINEERED PROTEINS WITH A PROTEASE CLEAVAGE SITE

FIGURE 9



(57) **Abstract:** Various aspects and embodiments herein relate to recombinant proteins with at least one protease recognition sequence that can be inactivated by a cognate protease and methods of preparing such proteins. In some embodiments, recombinant phosphoglucose isomerase (Pgi) proteins are provided. In other embodiments, recombinant phosphotransacetylase (Pta) proteins are provided. In yet other embodiments, recombinant transketolase A (TktA) proteins are provided.