(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
21 March 2013 (21.03.2013)

WIPO | PCT

(10) International Publication Number
WO 2013/037484 A3

(51) **International Patent Classification**:
C07K 16/28 (2006.01)

(21) **International Application Number**:
PCT/EP2012/003819

(22) **International Filing Date**:
12 September 2012 (12.09.2012)

(25) **Filing Language**: English

(26) **Publication Language**: English

(30) **Priority Data**:
61/533,510 12 September 2011 (12.09.2011) US

(71) **Applicant** *(for all designated States except US)*: **GENZYME CORPORATION** [US/US]; 15 Pleasant Street Connector, Framingham, MA 01701-9322 (US).

(72) **Inventors; and**
(75) **Inventors/Applicants** *(for US only)*: **SNELL, Daniel** [GB/GB]; 89 Tennyson Place, Ely, CB6 3WF (GB). **MENRAD, Andreas** [DE/GB]; 3 Twenty Pence Road, Wilburton, Ely, CB6 3RN (GB). **LACORCIA, Gina** [US/US]; 442 Fitchburg Turnpike, Concord, MA 01742 (US). **SHANKARA, Shrinivas** [US/US]; 17 Sheryl Dr, Shrewsbury, MA 01545 (US). **QIU, Huawei** [US/US]; 5 Primrose Lane, Westborough, MA 01581 (US). **PAN, Clark** [US/US]; 353 Dutton Road, Sudbury, MA 01776 (US). **KEBBLE, Benjamin** [CH/GB]; Freiestrasse 94, CH-8032 Zürich (CH).

(74) **Agent**: **MASCHIO, Antonio**; Maschio & Soames LLP, 20 Carlton Crescent, Southampton S015 2ET (GB).

(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, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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, 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**:
29 August 2013

WO 2013/037484 A3

(54) **Title**: ANTI-APLHABETATCR ANTIBODY

(57) **Abstract**: The present invention relates to humanized monoclonal antibodies comprising the CDRs of murine antibody BMA031, which bind to the apTCR.CD3 complex and possess improved biological properties.