

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
07 September 2023 (07.09.2023)



(10) International Publication Number
WO 2023/168432 A3

(51) International Patent Classification:

A61K 39/395 (2006.01) C07K 14/47 (2006.01)
A61P 7/04 (2006.01) C07K 16/40 (2006.01)

(21) International Application Number:

PCT/US2023/063716

(22) International Filing Date:

03 March 2023 (03.03.2023)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/316,928 04 March 2022 (04.03.2022) US

(71) Applicant: **COAGULANT THERAPEUTICS CORPORATION** [KR/KR]; Seoul Biohub, 402 Research Bldg., 117-3 Hoegi-ro, Dongdaemun-gu, 02455 (KR).

(72) Inventor; and

(71) Applicant (for RU only): **HERMISTON, Terry** [US/US]; 305 E. Strawberry Drive, Mill Valley, CA 94941 (US).

(72) Inventors: **BAUZON, Maxine**; 1033 Park Street, Hercules, CA 94547 (US). **SIM, Derek**; 1722 Quesada Way, Burlingame, CA 94010 (US). **SCHNEIDER, Douglas, M.**; 3329 Walnut Lane, Lafayette, CA 94549 (US). **TEBBE, Jan**; Am Alten Stellwerk 16, 50733 Köln (DE). **KENSCH, Oliver**; Brunostr. 125, 50259 Pulheim (DE). **WEBER, Ernst**; Hermann-Köhl Straße-1, 40764 Langenfeld (DE). **ELLINGER, Philipp**; Vollmerswertherstr. 411, 40221 Düsseldorf (DE). **FILARSKY, Katharina**; Vennstr. 105 a, 40627 Düsseldorf (DE). **MAHLERT, Christoph**; Kranichweg 11, 42111 Wuppertal (DE). **MARTINS DA CUNHA ABECASIS, Bernardo**; Rua Goncalo Velho Cabral 23 1-D, Lisboa 1400-188 (PT). **CASTRO FERREIRA, Inês, Margarida**; Rua Maria Telles Mendes 3 7-direito, Paco De Arcos 2770-120 (PT).

(74) Agent: **HANSEN, Christine, M.**; Quarles & Brady LLP, 135 N. Pennsylvania St., #2400, Attn: IP Docket, Indianapolis, IN 46204 (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,

(54) Title: HUMAN ANTIBODIES AGAINST ACTIVATED PROTEIN C AND USES THEREOF

Antibody name	antibody activity [2mM IgG] raw data slope AU 405nm /min	antibody activity [2mM IgG] raw data slope AU 405nm /min	VH/VL Combination	antibody activity @ 10 nM IgG / [AU/nM]	normalized antibody activity @ 2 m IgG / [AU/nM]	binding to hPC/SPR / KD [nM]	Tagg UNCLE [°C]	UNCLE remark	express [µg/ml]	stdev
TPP-26870	0.00902	0.00746	AL14542VH-AL14715VL	0.455	1.582	no binding	68.2	OK	139	11
TPP-26926	0.00916	0.00822	AL14545VH-AL14651VL	0.469	1.962	no binding	71.7	OK	184	11
TPP-26862	0.00869	0.00704	AL14542VH-AL14667VL	0.422	1.372	no binding	66.9	OK	59	11
TPP-26894	0.00808	0.00571	AL14544VH-AL14723VL	0.360	0.707	no binding	67.6	OK	63	4
TPP-26863	0.00795	0.00684	AL14542VH-AL14675VL	0.348	1.272	no binding	65.7	OK	34	5
TPP-26864	0.00706	0.00641	AL14542VH-AL14707VL	0.258	1.058	no binding	68.3	OK	58	6
TPP-26869	0.00862	0.0086	AL14542VH-AL14713VL	0.414	2.153	no binding	68.4	OK	164	30
TPP-26918	0.00842	0.00749	AL14545VH-AL14635VL	0.395	1.598	no binding	71.7	OK	166	5
TPP-26925	0.00862	0.00789	AL14545VH-AL14659VL	0.414	1.797	no binding	72.9	OK	123	10
TPP-26882	0.00767	0.00628	AL14543VH-AL14713VL	0.319	0.993	no binding	74.5	OK	178	14
TPP-26873	0.00809	0.0069	AL14542VH-AL14659VL	0.362	1.302	no binding	68.6	OK	127	5
TPP-26872	0.00782	0.00685	AL14542VH-AL14657VL	0.335	1.278	no binding	69.1	OK	87	4
TPP-26874	0.00843	0.00805	AL14542VH-AL14651VL	0.395	1.878	no binding	68.0	OK	170	12
TPP-26871	0.00802	0.00776	AL14542VH-AL14649VL	0.355	1.733	no binding	69.8	OK	162	19
TPP-26935	0.00842	0.00778	AL14549VH-AL14715VL	0.394	1.742	no binding	65.5	OK	90	18
TPP-24727	0.0078	0.00618	AL5992VH-AL5991VL	0.333	0.942	no binding	67.4	OK	69	13
TPP-26934	0.0091	0.00785	AL14549VH-AL14713VL	0.462	1.777	no binding	65.1	OK	149	40
TPP-26924	0.0077	0.0066	AL14545VH-AL14657VL	0.323	1.153	no binding	72.6	OK	102	4
TPP-26920	0.00839	0.00723	AL14545VH-AL14723VL	0.391	1.468	no binding	70.7	OK	85	12
TPP-26921	0.00821	0.00774	AL14545VH-AL14713VL	0.373	1.723	no binding	70.2	OK	161	7

FIG. 1

(57) Abstract: The present invention provides antibodies against activated protein C (APC). Certain disclosed antibodies inhibit the anticoagulant activity of APC while preserving its beneficial cytoprotective functions. The present invention also provides nucleic acids, vectors, and host cells for producing the antibodies disclosed herein, as well as methods of using the antibodies to treat medical conditions such as bleeding, sepsis, and inflammation.

[Continued on next page]

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, 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).

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:

14 March 2024 (14.03.2024)

(15) Information about Correction:

see Notice of 14 December 2023 (14.12.2023)