



(51) International Patent Classification:

A61K 38/45 (2006.01) C12N 9/12 (2006.01)  
C12Q 1/00 (2006.01) A61P 35/00 (2006.01)

(21) International Application Number:

PCT/EP2015/055975

(22) International Filing Date:

20 March 2015 (20.03.2015)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

14160920.6 20 March 2014 (20.03.2014) EP

(71) Applicants: **VIB VZW** [BE/BE]; Rijvisschestraat 120, B-9052 Gent (BE). **UNIVERSITEIT GENT** [BE/BE]; Sint-Pietersnieuwstraat 25, B-9000 Gent (BE).

(72) Inventors: **VANDENABEELE, Peter**; Nijverheidstraat 18, B-9040 Sint-Amandsberg (BE). **DONDELINGER, Yves**; Geestenspoor 86, B-2180 Ekeren (BE). **BERTRAND, Mathieu**; Sint-Pietersaalstraat 27/301, B-9000 Gent (BE). **DECLERCQ, Wim**; Mellestraat 378, B-8501 Heule-Kortrijk (BE).

(74) Common Representative: **VIB VZW**; Rijvisschestraat 120, B-9052 Gent (BE).

(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, 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, 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))



(54) Title: NECROPTOSIS INDUCING MLKL FRAGMENT AND INHIBITORS THEREOF

(57) Abstract: The present invention relates to a 4-helical bundle domain fragment (4HBD) of mixed-lineage kinase domain-like (MLKL) that is necessary and sufficient to induce necroptosis in cells, by binding to phosphatidylinositol phosphates (PIPs). The invention relates further to the use of this domain to screen inhibitors of the MLKL-PIP binding, and the use of those inhibitors to prevent necroptosis and to treat necroptosis associated diseases.