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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
30 March 2006 (30.03.2006)

PCT

(10) International Publication Number
WO 2006/033088 A2

(51) International Patent Classification: Not classified

(21) International Application Number:
PCT/IB2005/053162

(22) International Filing Date:
23 September 2005 (23.09.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/612,670 24 September 2004 (24.09.2004) US

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(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

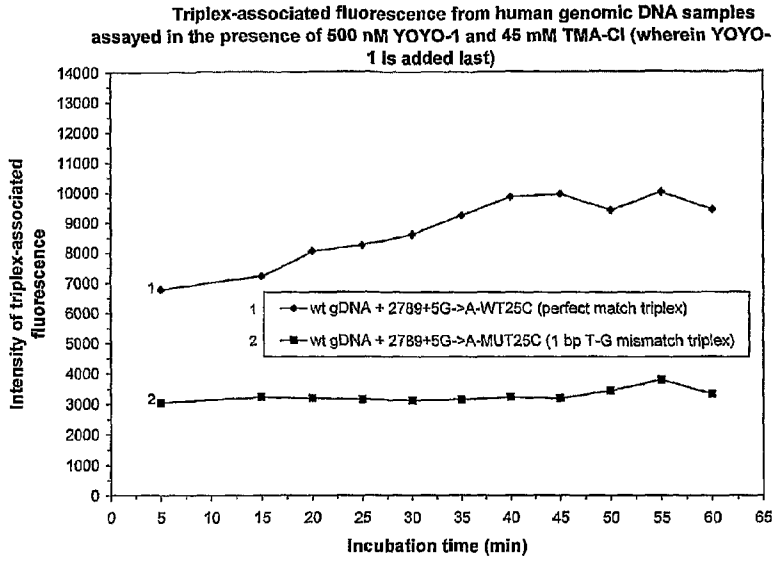
(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:
— *of inventorship (Rule 4.17(iv)) for US only*

Published:
— *without international search report and to be republished upon receipt of that report*

[Continued on next page]

(54) **Title:** GENOMIC ASSAY



(57) **Abstract:** A method of detecting a nucleic acid sequence in a genomic sample, includes: providing the genomic sample containing a target nucleic acid sequence of a duplex nucleic acid; providing, a probe containing a probe nucleic acid sequence; providing a hybridization mixture containing the genomic sample, the probe, a hybridization promoting agent and labels; incubating the hybridization mixture; irradiating the incubated mixture with radiation effective to stimulate at least some of the labels to emit energy; and detecting from a fluorescent signal whether the probe perfectly matches the target nucleic acid sequence, wherein the detecting is completed within sixty minutes of the hybridization mixture providing, and the method is conducted without denaturing and without PCR amplifying the duplex nucleic acid. A kit for practicing the method includes the probe, the hybridization promoting agent, and labels.

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