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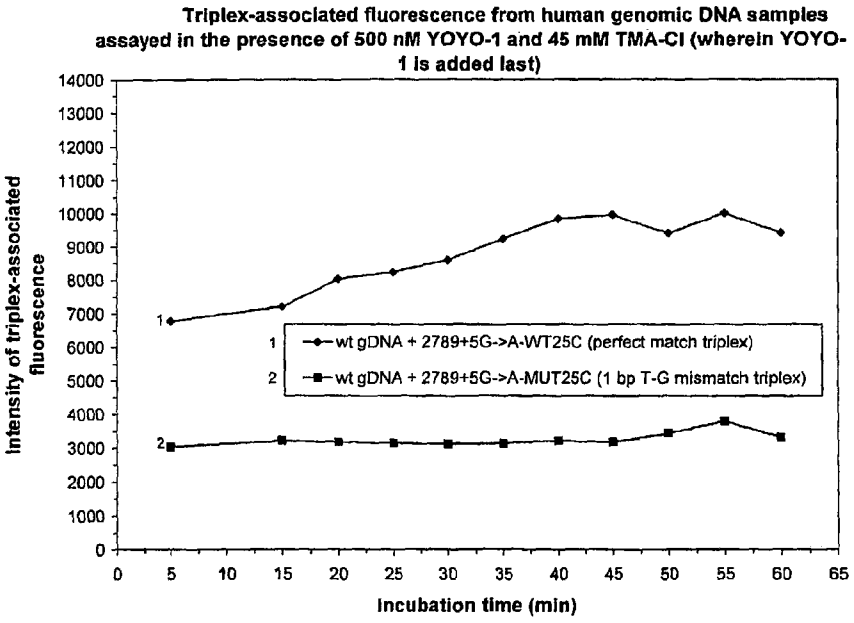
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(54) Title: GENOMIC ASSAY



(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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