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(54) Title: COMPOSITIONS AND METHODS FOR ANALYSIS OF NUCLEIC ACID MOLECULES DURING AMPLIFICATION REACTIONS

(57) Abstract: The present invention provides systems, methods and kits for performing a detection assay (e.g., invasive cleavage assay) in combination with an amplification assay (e.g., PCR), where the detection assay employs enzyme footprint probes with relatively short (e.g., 6-12 bases) analyte-specific regions configured to provide a preferred footprint length of duplex for use with a particular nucleic acid modifying enzyme. In some embodiments, such assays are used for target quantification, and in other embodiments, such assays are used for genotyping. In certain embodiments, the use of such short probes allows for assays with increased dynamic range.



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