

Title (en)
REAL TIME PCR DETECTION OF SINGLE NUCLEOTIDE POLYMORPHISMS

Title (de)
ECHTZEIT-PCR-NACHWEIS EINZELNER NUKLEOTID-POLYMORPHISMEN

Title (fr)
DÉTECTION PAR PCR EN TEMPS RÉEL DE POLYMORPHISMES NUCLÉOTIDIQUES SIMPLES

Publication
EP 2625290 A4 20140402 (EN)

Application
EP 11830866 A 20111004

Priority
• US 201113158593 A 20110613
• US 39070110 P 20101007
• US 38941210 P 20101004
• KR 2011007294 W 20111004

Abstract (en)
[origin: WO2012046981A2] Disclosed are methods and kits for the detection of a polymorphism during real-time PCR. Real-time PCR amplification of a target nucleic acid sequence is performed using PCR primer primers that anneal to sequences flanking a single nucleotide polymorphism (SNP) of interest. The real-time PCR reaction includes a labeled probe comprising a RNA sequence that is designed to anneal to DNA sequences at the location of the SNP. An RNA:DNA heteroduplex can then form between the SNP in the PCR fragment and the probe's RNA sequences that are complementary to the SNP. RNase H cleavage of the RNA sequence in the RNA:DNA heteroduplex results in increase in intensity of the signal generated from the label that is indicative of the presence of an SNP in the target nucleic acid.

IPC 8 full level
C12N 15/09 (2006.01); **C12Q 1/68** (2006.01); **G06F 19/22** (2011.01)

CPC (source: EP KR)
C12Q 1/6827 (2013.01 - KR); **C12Q 1/686** (2013.01 - EP KR); **C12Q 2521/327** (2013.01 - EP KR); **C12Q 2561/113** (2013.01 - EP)

Citation (search report)
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• [XII] HIDETAKE ESAKI ET AL: "Rapid detection of quinolone-resistant Salmonella by real time SNP genotyping", JOURNAL OF MICROBIOLOGICAL METHODS, vol. 58, no. 1, 1 July 2004 (2004-07-01), pages 131 - 134, XP055103125, ISSN: 0167-7012, DOI: 10.1016/j.mimet.2004.03.010
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• [Y] JOHN J. HARVEY ET AL: "SNP analysis using catacleave probes", JOURNAL OF CLINICAL LABORATORY ANALYSIS, vol. 22, no. 3, 1 January 2008 (2008-01-01), pages 192 - 203, XP055098111, ISSN: 0887-8013, DOI: 10.1002/jcla.20240
• [Y] HARVEY J J ET AL: "Characterization and applications of CataCleave probe in real-time detection assays", ANALYTICAL BIOCHEMISTRY, ACADEMIC PRESS INC, NEW YORK, vol. 333, no. 2, 15 October 2004 (2004-10-15), pages 246 - 255, XP004573012, ISSN: 0003-2697, DOI: 10.1016/J.AB.2004.05.037
• See references of WO 2012046981A2

Designated contracting state (EPC)
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DOCDB simple family (application)
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