

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
C12Q 1/68 (2006.01); **C12N 15/09** (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)

- [AD] US 5763181 A 19980609 - HAN MYUN KI [US], et al
- [XJ] 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
- [XJ] "CycleavePCR (TM) Core Kit", PRODUCT INFORMATION, 26 September 2008 (2008-09-26), XP055103372, Retrieved from the Internet <URL:http://old.takara.co.kr/pds/shop/product/manual/CY501_e.pdf> [retrieved on 20140220]
- [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)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
WO 2012046981 A2 20120412; WO 2012046981 A3 20120719; CN 103154271 A 20130612; EP 2625290 A2 20130814; EP 2625290 A4 20140402; JP 2013545442 A 20131226; KR 20120046018 A 20120509

DOCDB simple family (application)
KR 2011007294 W 20111004; CN 201180048810 A 20111004; EP 11830866 A 20111004; JP 2013532717 A 20111004; KR 20110100028 A 20110930