



Nuclear Laser Medicine

ApoE

ApoE Real Time (FRET)

Apolipoprotein E (ApoE) is a plasma lipoprotein synthesized primarily in the liver and it is involved in the transport of cholesterol and other lipids. The presence of mutations or polymorphisms can determine the appearance of disorders in lipoprotein metabolism and a greater predisposition to cardiovascular diseases. ApoE also plays a decisive role in the central nervous system where it is involved in the mobilization and redistribution of cholesterol, phospholipids and fatty acids and it is implicated in various mechanisms such as neuronal development. Furthermore, the evaluation of the ApoE4 genotype is necessary for the treatment of Alzheimer's disease.

CHARACTERISTICS



Target

ApoE2, ApoE3 and ApoE4



Technology

Real Time PCR



Sample

Blood (EDTA or citrate)



Analysis software

Software Real Gene
(code NLM DO022)



Automation

OMNIA SYSTEM

- ✓ Nucleic acid extraction + PCR set up
- ✓ Complete traceability
- ✓ LIS connectivity

WORKFLOW

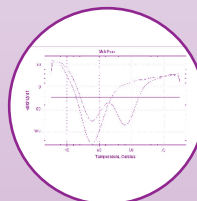
DNA Extraction



Real Time PCR



Results



In the population, different isoforms of this protein have been identified. These differ from each other for the substitution of a single amino acid that determines however profound consequences at cellular and molecular level: in particular are involved the amino acids in position 112 (rs429358 polymorphism) and in position 158 (rs7412 polymorphism).

ApoE	e3/e3	e3/e4	e2/e3	e2/e4	e2/e2	e4/e4
334T	•	•	•	•	•	
334C		•		•		•
472T			•	•	•	
472C	•	•	•	•		•



2 MIX READY-TO-USE



OPTIONAL POSITIVE CONTROLS



ENZIMA UNG



INTERPRETATION SOFTWARE
BIDIRECTIONALLY CONNECTED WITH LIS

COMPATIBILITY

Automatic

- Extraction+ PCR Set Up: OMNIA LH 75 instrument (code NLM AA1319/48 AA1319/96)

Extraction

- QIAasymphony® (Extraction DSP DNA Mini, code NLM AA1439/192)
- MagCore® (Extraction DNA code NLM AA1185)
- Maxwell® (Extraction DNA code AA1038)
- Extraction DNA manual on column (code NLM AA1001)

Real Time Instrument

- CFX BioRad



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Name	Code	Format
ApoE Real Time (FRET)	AA1524/25A	25
Heterozygous ApoE control (Real Time)	FA134/10	10