

PlicaGen™ ApoE GT qPCR Kit

**RELIABLE APOE GENOTYPING
FOR ALZHEIMER'S DISEASE
RISK ASSESSMENT**



Accurate APOE Genotyping by Real-Time PCR Detects the two clinically relevant APOE SNPs in a single assay

- Multiplex qPCR assay
- Detects rs429358 and rs7412 in a single assay
- Identifies all six major APOE genotypes
- High-specificity allele discrimination
- Ready-to-use master mix for faster preparation
- Compatible with NeXgen™ 16HP and standard real-time PCR instruments

Why APOE Genotyping?

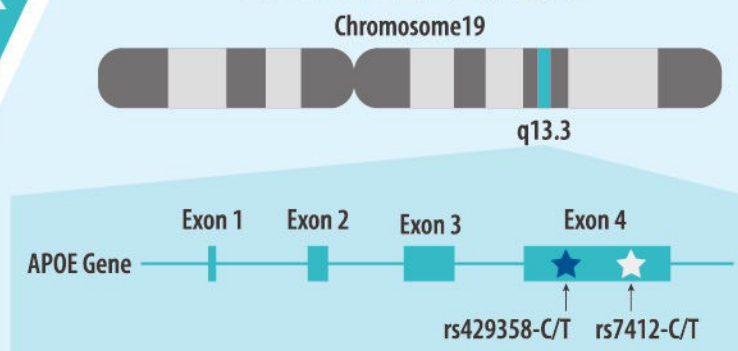
Understanding Alzheimer's Disease Risk

Alzheimer's disease is the leading cause of dementia worldwide. While age remains the strongest risk factor, genetic predisposition plays an important role in disease susceptibility.

The APOE (Apolipoprotein E) gene is the most important genetic risk factor associated with late-onset Alzheimer's disease.

PlicaGen™ ApoE GT qPCR Kit detects the two defining SNPs rs429358 and rs7412.

APOE Gene Structure



Together, these two SNPs define the three APOE alleles:

Allele	ε2	ε3	ε4
Haplotype	rs429358-T rs7412-T	rs429358-T rs7412-C	rs429358-C rs7412-C
Residue combination	112-Cys 158-Cys	112-Cys 158-Arg	112-Arg 158-Arg

The six possible APOE genotypes:

APOE Genotype	Alzheimer's Risk	General Interpretation
ε2 / ε2	Lowest risk	Strongly protective
ε2 / ε3	Lower than average risk	Protective
ε3 / ε3	Average population risk	Neutral; most common genotype
ε2 / ε4	Intermediate risk	ε2 provides some protection, but ε4 still increases risk
ε3 / ε4	Increased risk	Approximately 2–4× higher lifetime risk than ε3/ε3
ε4 / ε4	Highest risk	Approximately 8–15× higher lifetime risk; earlier onset is more common

Clinical Applications



Alzheimer's
Disease Risk
Assessment



Precision
Medicine
Programs



Preventive
Health
Screening



Neurology
Clinics



Clinical
Research



Population
Studies

Flexible Workflow Options

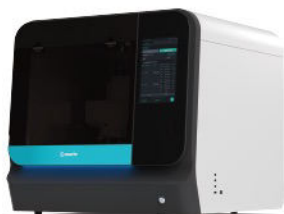
Fully Automated Solution Workflow

Whole Blood



DNA Extraction + PCR Setup +
Multiplex qPCR

Neogen
16HP



+

PlicaGen™ ApoE GT qPCR Kit



Automatic Analysis



Simple and Reliable Workflow

Whole Blood



DNA Extraction
MagPurix 12 | N.E.O.



PlicaGen™ ApoE GT qPCR Kit



Real-Time PCR



Manual Genotype Calling



Manual Extraction Workflow

Whole Blood



Manual DNA Extraction



PlicaGen™ ApoE GT qPCR Kit



Real-Time PCR



Manual Genotype Calling



Assay Performance

Clear APOE Genotype Discrimination

Allelic discrimination plots clearly separate the **TT, TC, and CC genotypes** according to their proximity to validated positive-control clusters.

Clear APOE Genotype Control Discrimination

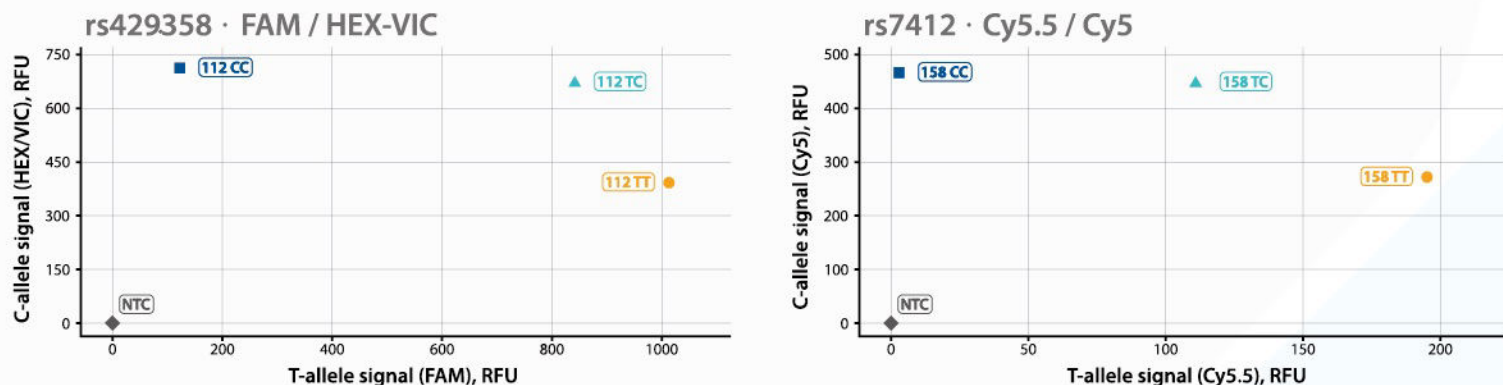


Figure 1. Clear separation of APOE positive-control signals following TaqMan® qPCR amplification.

Clear and Consistent APOE Genotype Discrimination

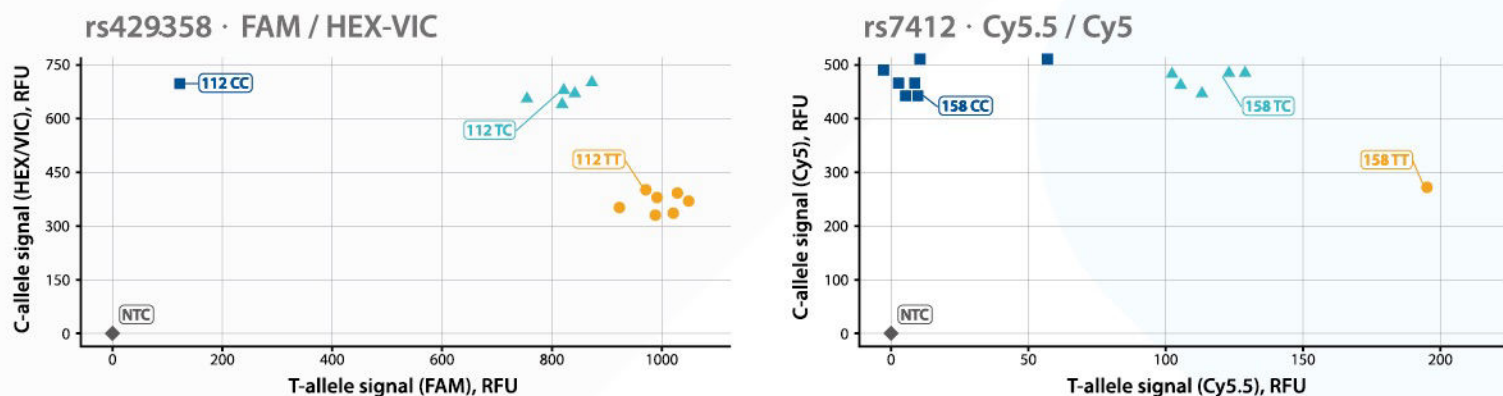


Figure 2. Reliable classification of APOE sample genotypes based on their fluorescence profiles.

Assay Specifications

Parameter	Specification
Targets	rs429358, rs7412
Sample Type	Purified genomic DNA
Method	Allelic discrimination qPCR
Genotypes	6 APOE genotypes
Multiplex	Yes
Internal Control	Yes



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