Qexp-MDx APOE Genotyping Kit

BiOptic Inc.

Apolipoprotein E (APOE) is involved in blood lipids metabolism and is related to diseases such as Alzheimer's disease, hyperlipidemia, etc. Due to DNA sequence-specific **single nucleotide polymorphism (SNP) mutation**, there are three types of *APOE*: ε2 (Cys112, Cys158), ε3 (Cys112, Arg158), and ε4 (Arg112, Arg158). one of each pair is inherited from each parent, so *APOE* dual genotype combinations have **six types: ε2/ε2, ε2/ε3, ε2/ε4, ε3/ε3, ε3/ε4, ε4/ε4**.

The Relationship with Alzheimer's disease

According to research, people with an **ε4** have a risk of Alzheimer's disease in their later years will **be increased** about 3-5 times, 5-15 times higher risk with the genotype ε4/ε4. The genotype of **ε2** is uncommon and it might have the effect of antagonizing Alzheimer's disease. *APOE* **ε3** is the most common allele. Researchers believe that it plays a mild role in the disease and neither reduces nor increases the risk of Alzheimer's disease.

The Relationship with cardiovascular disease

The metabolic function of the most common ε3 genotype is normal, where the risk of developing cardiovascular and cerebrovascular diseases is the lowest. People with the rarer **ε2 genotype** have lower amounts of serum total cholesterol (TC) and LDL-Cho, but studies indicate that genotype ε2/ε2 is highly correlated with genetic disorder-familial type III hyperlipoproteinemia. And it is prone to the abnormal function of the liver metabolizing lipoproteins, which causes the cholesterol in the liver to not be removed and accumulate in the plasma, leading to disease occurrence. However, those who carry *APOE* **ε4** will have a worse ability to eliminate low-density lipoprotein cholesterol (LDL-Cho) in the blood, leading to higher amounts of serum total cholesterol (TC) and LDL-Cho, belong to the high-risk group of getting arteriosclerosis, heart disease, etc.

3 STEPs to know your genotype

Sample Collection → **Direct PCR** → **Results Analysis**

Saliva   **Buccal**

Blood

Qamp~mini~ Thermal Cycler

✓ Pre-program chip
✓ One-button start!
✓ Save time!
✓ Easy to use!

Qsep **Series** Fragment Analyzer

Q-Analyzer

✓ User-friendly
✓ 3 steps complete
✓ Automated reporting

Run

Qexp-MDx APOE Genotyping Kit "Features"

Extraction Free
Direct PCR

No need for nucleotide extraction
Start PCR after simple lysis
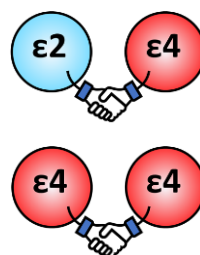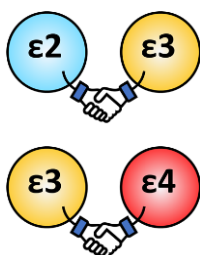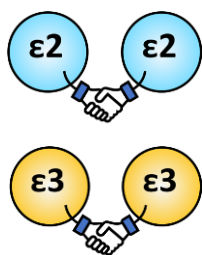Save time and make it easier to operate
Genetic Testing as life

Multiple Targets

Multiplex PCR in one tube

Qsep series-Fragments Analysis

Genotype	Risk of disease
ε2	Low
ε3	--
ε4	High

ε2/ε2 : 112, 253, 514 bp
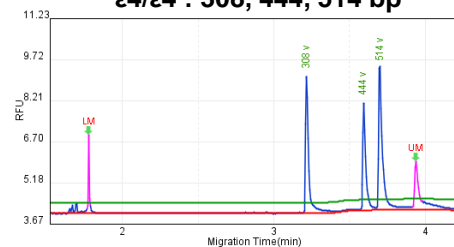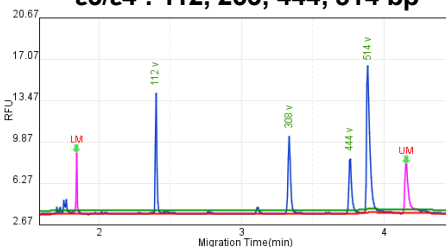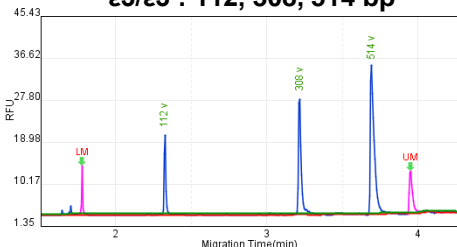### ε2/ε3 : 112, 253, 308, 514 bp
ε2/ε4 : 112, 253, 308, 444, 514 bp
ε3/ε3 : 112, 308, 514 bp
ε3/ε4 : 112, 253, 444, 514 bp
ε4/ε4 : 308, 444, 514 bp
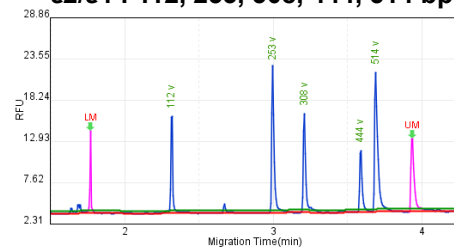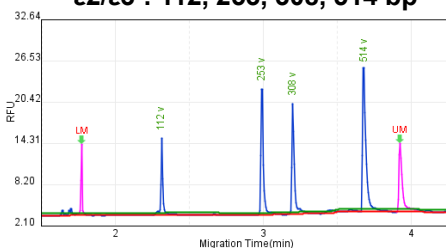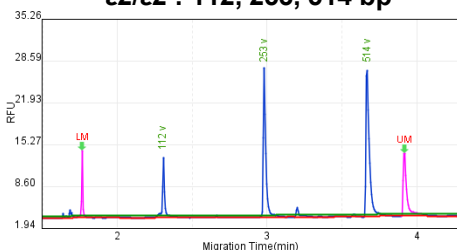
Order Information

Catalog No.	Product	Unit
C900400-24 C900400-48	*Qexp*-MDx APOE Genotyping Kit (Blood)	24 rxn 48 rxn
C903401-024 C903401-048	*Qexp*-MDx APOE Genotyping Kit (Saliva)	24 rxn 48 rxn
C903402-024 C903402-048	*Qexp*-MDx APOE Genotyping Kit (Oral Swab)	24 rxn 48 rxn