



APOE Alzheimer's Disease Risk

Order Name: **APOE Alzheimer DR**
Test Number: 5197135
Revision Date: 04/17/2025

TEST NAME	METHODOLOGY	LOINC CODE
APOE Alzheimer's Disease Risk	Illumina SNP Array	See Below

SPECIMEN REQUIREMENTS

Specimen	Specimen Volume (ml)	Specimen Type	Specimen Container	Transport Environment
Preferred	1 Tube	Whole Blood	EDTA (Lavender Top)	Refrigerated
Alternate 1	1 Tube	EDTA Whole Blood	ACD Solution A or B (Yellow Top)	Refrigerated
Alternate 2	1 Tube	Whole Blood	Sodium Heparin (Green Top / No-Gel)	Refrigerated
Instructions	<p>Specimen: 1 tube whole blood. (Refrigerated for optimal stability) Container: Lavender-top (EDTA) tube (preferred), yellow-top (ACD) tube or green-top (heparin) tube. Collection: Invert tube immediately eight to 10 times once tube is filled at time of collection. Stability Requirements: Room temperature 3 days for whole blood; Refrigerated 60 days; Frozen n/a Cause for Rejection: Wrong specimen container; mislabeled specimen</p>			

GENERAL INFORMATION

Expected TAT	5 - 7 days																								
Clinical Use	<p>Alzheimer's disease is a progressive neurodegenerative disorder that affects more than 6.7 million Americans ages 65 and older and is the most common form of dementia in the elderly. Signs and symptoms may include cognitive decline, memory loss, loss of problem-solving skills and personality changes. Clinical symptoms appear after 60-65 years in 95% of cases. The development of late-onset disease may be influenced by age, sex, family history, level of education, history of head trauma and other factors including cardiovascular risk factors.</p> <p>Approximately 15-20% of late-onset disease may be familial. The APOE gene is a known susceptibility gene for Alzheimer's disease. The APOE gene encodes apolipoprotein E, which has a role in lipid metabolism. APOE has three common alleles: E2, E3 and E4. The presence of the E4 allele increases the lifetime risk of Alzheimer's disease but is neither necessary nor sufficient for the development of Alzheimer's disease. APOE E2 may have some protective effect against development of late-onset disease.¹ APOE also has a rare allele: E1 (legacy name E3r). There is insufficient evidence to assess the clinical association of APOE E1 with Alzheimer's disease.²</p> <p>1. Goldman JS, Hahn SE, Catania JW, et al. Genetic counseling and testing for Alzheimer disease: joint practice guidelines of the American College of Medical Genetics and the National Society of Genetic Counselors. <i>Genet Med.</i> 2011 Jun;13(6):597-605.21577118 2. Murrell JR, Price BM, Baiyewu O, et al. The fourth apolipoprotein E haplotype found in the Yoruba of Ibadan. <i>Am J Med Genet B Neuropsychiatr Genet.</i> 2006 Jun 5;141B(4):426-427.16583434</p>																								
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