

Recombinant Human APOA1, C13&N15-labeled

Cat. No. APOA1-217H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Apo-A1 MS Standard Protein, C13 and N15-labeled (Apo-A1, Heavy Labeled) Asp 25 - Gln 267 (Accession # NP_000030.1) was produced in human 293 cells (HEK293).
Species	Human
Source	HEK293
ProteinLength	25-267 a.a.
Description	ApoA1 is also known as apolipoprotein A-I, ApoA-I , and is the major protein component of high density lipoprotein (HDL) in plasma. It has a specific role in lipid metabolism. Chylomicrons secreted from the intestinal enterocyte also contain ApoA1 but it is quickly transferred to HDL in the bloodstream [1]. The protein promotes cholesterol efflux from tissues to the liver for excretion. It is a cofactor for lecithin cholesterolacyltransferase (LCAT) which is responsible for the formation of most plasma cholesteryl esters. ApoA-I was also isolated as a prostacyclin (PGI₂) stabilizing factor, and thus may have an anticlotting effect.[2] Defects in the gene encoding it are associated with HDL deficiencies, including Tangier disease, and with systemic non-neuropathic amyloidosis.[3] In addition, it has been shown that ApoA1 is implicated in the anti-endotoxin function of HDL via interaction with lipopolysaccharide or endotoxin. [4]
Form	Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally Mannitol or

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Trehalose are added as protectants before lyophilization.

Molecular Mass

Apo-A1, Heavy Labeled, fused with 6×His tag at the C-terminus, has a calculated MW of 29 kDa. The predicted N-terminus is Asp 25. DTT-reduced Protein migrates as 26-30 kDa.

Endotoxin

Less than 1.0 EU per µg of the Apo-A1, Heavy Labeled by the LAL method.

Purity

>95% as determined by SDS-PAGE.

Storage

Avoid repeated freeze-thaw cycles.No activity loss was observed after storage at:In lyophilized state for 1 year (4oC-8oC); After reconstitution under sterile conditions for 1 month (4oC-8oC) or 3 months (-20oC to -70oC).

GENE INFORMATION

Gene Name

APOA1 apolipoprotein A-I [Homo sapiens]

Official Symbol

APOA1

Synonyms

APOA1; apolipoprotein A-I; apo-AI; apoA-I; MGC117399;

Gene ID

335

mRNA Refseq

NM_000039

Protein Refseq

NP_000030

MIM

107680

UniProt ID

P02647

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Chromosome Location	11q23-q24
Pathway	ABC-family proteins mediated transport, organism-specific biosystem; ABCA transporters in lipid homeostasis, organism-specific biosystem; African trypanosomiasis, organism-specific biosystem; African trypanosomiasis, conserved biosystem; Amyloids, organism-specific biosystem; Chylomicron-mediated lipid transport, organism-specific biosystem; Disease, organism-specific biosystem;
Function	apolipoprotein A-I receptor binding; apolipoprotein receptor binding; beta-amyloid binding; cholesterol binding; contributes_to cholesterol transporter activity; cholesterol transporter activity; enzyme binding; high-density lipoprotein particle binding;