Human Apolipoprotein C-II

Cat. No. APOC2-4773H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Product is 0.5 mg human APOC2 lyophilized from 0.01M ammonium bicarbonate. Very low density lipoproteins (VLDL) are isolated from fresh human plasma by ultracentrifugation. The VLDL are delipidated and the APOC2 is purified by using proprietary column chromatographic methds.
Species	Human
Description	The protein encoded by this gene is secreted in plasma where it is a component of very low density lipoproteins and chylomicrons. This protein activates the enzyme lipoprotein lipase in capillaries[1], which hydrolyzes triglycerides and thus provides free fatty acids for cells. Mutations in this gene cause hyperlipoproteinemia type IB, characterized by hypertriglyceridemia, xanthomas, and increased risk of pancreatitis and early atherosclerosis.
Properties	APOC2, which has a Mr of 8.8 kD, is a cofactor for lipoprotein lipase, the enzyme that catalyzes the hydrolysis of triglycerides. Due to its amphipathic structure, APOC2 self-associates into oligomers at high protein concentrations. At concentrations above 1 mg/ml there may be little or no free monomer in the solution. APOC2 exists as monomers in buffers containing 5 M guanidine-HCl or 6 M urea.
Specifications	Purity and identity are at least 98% as determined by quantitative laser densitometry of Coomassie Blue-stained SDS- and alkaline urea polyacrylamide gels. Protein is determined by the Pierce BCA Method, which was found to be comparable to the Lowry method, using 1% SDS with BSA as the standard.

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Reconstitution	To ensure complete solubilization and to minimize self-association and aggregation, the lyophilized powder should be dissolved in 5M guanidine-HCl. The buffer then may be changed by dilution, dialysis or gel filtration. Freezing solutions of apolipoproteins in the absence of denaturants favors self-association or aggregation.
Storage	Store unopened product at -20°C or below. Store reconstituted material at 2-8°C no longer than 4 weeks.
Pathways	Chylomicron-mediated lipid transport; HDL-mediated lipid transport; Lipid digestion; Lipoprotein metabolism; Metabolism of lipids and lipoproteins; Statin Pathway

GENE INFORMATION

Gene Name	APOC2 apolipoprotein C-II [Homo sapiens]
Official Symbol	APOC2
Synonyms	APOC2; apolipoprotein C-II; APO-CII; APOC-II; MGC75082; apolipoprotein C-II; apolipoprotein C2; Apolipoprotein C-II; Apolipoprotein C2
Gene ID	344
mRNA Refseq	NM_000483
Protein Refseq	NP_000474
MIM	608083
UniProt ID	P02655
Chromosome	19q13.2

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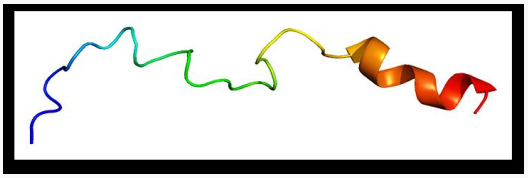
Location	
Function	enzyme activator activity; lipase inhibitor activity; lipid binding; lipoprotein lipase activator activity; phospholipase activator activity; phospholipase binding; protein homodimerization activity
PDB renderingbased on 1by6	

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