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# Product Information

**Apolipoprotein A-I, human, histidine-tagged, recombinant, expressed in HEK 293 cells**

Catalog Number **SRE0012**

**Synonyms**: Apo-AI, ApoA-I

## Product Description

Recombinant human Apolipoprotein A-I is expressed in HEK 293 cells as a monomer of 280 amino acids, with an apparent molecular weight of 28 kDa. It is a major protein component of high density lipoprotein (HDL) in plasma[1]. The protein promotes cholesterol efflux from tissues to the liver for excretion, and it is a cofactor for lecithin cholesterolacyltransferase (LCAT) which is responsible for the formation of most plasma cholesteryl esters[2]. The gene that encodes to Apolipoprotein A-I is *APOA1*. This gene is closely linked with two other apolipoprotein genes on chromosome 11[3]. Defects in this gene are associated with HDL deficiencies, including Tangier disease[4], and with systemic non-neuropathic amyloidosis[5]. The protein is made up of one major isoform (pI 5.6) and two minor isoforms (pI 5.53 and 5.46). Apo-AI shows a high content of α-helix structure[6]. The amphipathic regions in the α-helix structure seem to be responsible for lipid binding capacity. In aqueous solution, Apo-AI shows self-association with minor conformation change[6]. In addition, it has been shown that Apo-AI is implicated in the anti-endotoxin function of HDL via interaction with lipopolysaccharide or endotoxin[7].

This product is lyophilized from PBS.

Purity: ≥98% (SDS-PAGE)

Endotoxin level: ≤1 EU/µg Apolipoprotein A-I

## Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

## Preparation Instructions

Briefly centrifuge the vial before opening. It is recommended to reconstitute the protein in sterile DDW to a final concentration of 100 µg/ml. Adding 0.1% endotoxin-free recombinant human serum albumin is recommended.

## Storage/Stability

Store product at -20 °C. The product retains its concentration for at least 2 years as supplied. After initial thawing it is recommended to store the protein in working aliquots at -20 °C.

## References

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3. Tadao Arinami, et al., Assignment of the apolipoprotein A-I gene to 11q23 based on RFLP in a case with a partial deletion of chromosome 11, del(11)(q23.3→qter), *Human Genetics*, **85 (1)**, 39-40 (1990)
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5. Benson MD., Ostertag revisited: the inherited systemic amyloidoses without neuropathy. *Amyloid*. **12(2)**, 75-87 (2005)
6. Philippe G. Frank and Yves L. Marcel, Apolipoprotein A-I: structure–function relationships *J. Lipid Res.* **41(6)**, 853-872 (2000)
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