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Product Information

SILu™Lite APOA1, Apolipoprotein A-1, human recombinant, expressed in HEK cells
MS Protein Standard

Catalog Number **MSST0002**
Storage Temperature –20 °C

Synonym: Apolipoprotein A1

Product Description
SILu™Lite ApoAI is a recombinant human protein expressed in human 293 cells. It is a monomer of 286 amino acids (including N-terminal propeptide and C-terminal polyhistidine and V5 tags), with a calculated molecular mass of 33.0 kDa. SILu™Lite ApoAI is an analytical standard designed to be used as starting material for preparation of calibrators and controls in LC-MS applications.

Apolipoprotein A-I (Apo-AI), is a major protein component of high density lipoprotein (HDL) in plasma.[1] Reduced plasma high-density lipoprotein cholesterol (HDLc) levels have been recognized as a key risk factor for atherosclerotic cardiovascular disease (CVD).[2] Direct serum HDLc and LDLc measurements are unreliable in hypertriglyceridemic sera. However, serum Apo-AI and other lipoproteins can be measured accurately and enable the identification of individuals at increased CVD risk and can therefore be used as reliable CVD biomarkers.[3,4]

Each vial contains 50–65 μg of SILu™Lite ApoAI standard, lyophilized from a solution of phosphate buffered saline. Vial content was determined by the Bradford method using BSA as a calibrator. The correction factor from the Bradford method to Amino Acid Analysis is 70% for this protein.

Identity: Confirmed by peptide mapping

Purity: ≥95% (SDS-PAGE)

UniProt: P02647

Sequence Information
The N-terminal propeptide and C-terminal polyhistidine and V5 tags are italicized.

*RHFWQQ*DEPPQSPWDRVKDLATVYVDVLKDSGRDY
VSQFEGSALGKQLNLK**LLDNWDSVTSTFSK**LREQLG
PVTQEFWDNLEKETEGLRQEMSKDLEEVKAKVQPYL
DDFQKKWQEEMELYRQKVEPLRAELQEGARQKLHE
LQEKLSPLGEEMRDRARAHVDALRTHLAPYSDELRQ
RLAARLEALKENGGARLAEYHAK**ATEHLSTLSEK**AKP
ALEDLR**QGLLPVLESFK**VSFLSALEEYTKKLNTQ*SDP
SRGPFEGKPIPNPLLGLDSTRTGHHHHHHHHGGQ*

Transitions for three peptides (underlined) suggested for selected reaction monitoring analysis (SRM) are provided via an Excel table available for download on the product display page at www.sigmaaldrich.com.

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the 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 ultrapure water to a final concentration of 100 μg/ml.

Storage/Stability
Store the lyophilized product at –20 °C. The product is stable for at least 2 years as supplied.

After reconstitution, it is recommended to store the protein in working aliquots at –20 °C.

References

1. Rubin, E.M. *et al*., Expression of human apolipoprotein A-I in transgenic mice results in reduced plasma levels of murine apolipoprotein A-I and the appearance of two new high density lipoprotein size subclasses. *PNAS*, **88** (2), 434-438 (1991).
2. Lamarche, B. *et al*., HDL metabolism in hypertriglyceridemic states: an overview. *Clin. Chim. Acta,* **286** (1-2), 145-61 (1999).
3. Broek, I. *et al.,* Towards clinically actionable quantification of proteins by MS: a critical appraisal of bias and imprecision for serum apolipoproteins A-I and B. *MSACL Poster*, MSACL Euro (2014).
4. Broek, I., *et al.,* In Pursuit of Traceability for Serum Apolipoprotein A-I and B Quantitation by Mass Spectrometry. *ASMS Poster* (2014).

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