

Product Information

SILu™Prot APOA2, Apolipoprotein A-2, human recombinant, expressed in HEK cells SIL MS Protein Standard, ¹³C- and ¹⁵N-labeled

Catalog Number **MSST0029**

Storage Temperature $-20\text{ }^{\circ}\text{C}$

Synonyms: Apo-AII, ApoA-II

Product Description

SILu™Prot APOA2 is a recombinant, stable isotope-labeled human APOA2 which incorporates [¹³C₆, ¹⁵N₄]-Arginine and [¹³C₆, ¹⁵N₂]-Lysine. Expressed in human 293 cells, it is designed to be used as an internal standard for bioanalysis of APOA2 in mass spectrometry. SILu™Prot APOA2 is a homodimer of 97 amino acids (including C-terminal polyhistidine and FLAG® tags), with a calculated molecular mass of 11.2 kDa.

Apolipoprotein A-II (ApoA-II) occurs in plasma as a dimer of two 77-amino acid chains linked by a disulfide bridge.¹ After ApoA-I, it is the second major protein component of HDL, accounting for ~20% of HDL total protein.¹⁻⁴ ApoA-II is thought to play an important role in triglyceride metabolism both from animal and human studies.^{3,5} Recent findings attribute ApoA-II to inhibitory effects on lipoprotein lipase-mediated hydrolysis of triglyceride-rich particles.^{6,7} Additional associations of ApoA-II have been reported for a variety of protein factors including hepatic lipase (HL), lipoprotein lipase (LPL), endothelial lipase, CETP, PLTP, and LCAT.^{1-2,8}

Each vial contains 10–13 µg of SILu™Prot APOA2 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 65% for this protein.

Identity: Confirmed by peptide mapping

Purity: ≥95% (SDS-PAGE)

Heavy amino acid incorporation efficiency: ≥98% (MS)

UniProt: P02652

Sequence Information

The C-terminal polyhistidine and FLAG tags are italicized.

QAKEPCVESLVSQYFQTVTDYGKDLMEKVKSPQLQA
EAKSYFEKSKEQLTPLIKKAGTELVNFLSYFVELGTQP
ATQDYKDDDDKGGHHHHHHHHGGQ

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 $-20\text{ }^{\circ}\text{C}$. The product is stable for at least 2 years as supplied. After reconstitution, it is recommended to store the protein in working aliquots at $-20\text{ }^{\circ}\text{C}$.

References

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2. Tailleux, A. et al., Apolipoprotein A-II, HDL metabolism and atherosclerosis. *Atherosclerosis*, **164**, 1–13 (2002).
3. Kalopissis, A.D. et al., Apolipoprotein A-II: beyond genetic associations with lipid disorders and insulin resistance. *Curr. Opin. Lipidol.*, **14**, 165–172 (2003).
4. Martin-Campos, J.M. et al., Apolipoprotein A-II, genetic variation on chromosome 1q21-q24, and disease susceptibility. *Curr. Opin. Lipidol.*, **15**, 247–253 (2004).
5. Scanu, A.M., and Edelstein, C., HDL: bridging past and present with a look at the future. *FASEB J.*, **22**, 4044–4054 (2008).
6. Dugue-Pujol, S. et al., Human apolipoprotein A-II associates with triglyceride-rich lipoproteins in plasma and impairs their catabolism. *J. Lip. Res.*, **47**, 2631–2639 (2006).
7. Julve, J. et al., Human apolipoprotein A-II determines plasma triglycerides by regulating lipoprotein lipase activity and high-density lipoprotein proteome. *Arterioscler. Thromb. Vasc. Biol.*, **30**, 232–238 (2010).
8. Brousseau, M.E. et al., Effects of cholesteryl ester transfer protein inhibition on apolipoprotein A-II containing HDL subspecies and apolipoprotein A-II metabolism. *J. Lip. Res.*, **50**, 1456–1462 (2009).

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