

## Product Information

**SILu™Prot APOD, Apolipoprotein D, human recombinant, expressed in HEK 293 cells**  
**SIL MS Protein Standard, <sup>13</sup>C and <sup>15</sup>N-labeled**

Catalog Number **MSST0061**  
Storage Temperature **-20 °C**

Synonyms: Apo-D, ApoD

### Product Description

SILu™Prot APOD is a recombinant, stable isotope-labeled human APOD which incorporates [<sup>13</sup>C<sub>6</sub>, <sup>15</sup>N<sub>4</sub>]-Arginine and [<sup>13</sup>C<sub>6</sub>, <sup>15</sup>N<sub>2</sub>]-Lysine. Expressed in human 293 cells, it is designed to be used as an internal standard for bioanalysis of APOD in mass spectrometry. SILu™Prot APOD is a protein of 189 amino acids (including C-terminal polyhistidine and FLAG® tags), with a calculated molecular mass of 21.8 kDa.

Apolipoprotein D is a member of the Apolipoprotein family.<sup>1</sup> Unlike other lipoproteins, which are mainly produced in the liver, apolipoprotein D is primarily produced in the brain and testes.<sup>2</sup> It was found to be a putative biomarker of androgen receptor function in androgen insensitivity syndrome, the most common cause of disorders of sex development.<sup>3</sup> Apolipoprotein D is associated with neurological disorders and nerve injury, especially related to myelin sheath.<sup>2</sup> It was shown to be elevated in a rat model of stroke,<sup>2</sup> and is elevated in patients with schizophrenia, bipolar disorder, and Alzheimer's disease.<sup>2</sup>

Each vial contains 10 µg of SILu™Prot APOD standard, lyophilized from a solution of phosphate buffered saline. Vial content was determined by the Bradford method using BSA as a calibrator.

Purity: ≥95% (SDS-PAGE)

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

UniProt: P05090

### Sequence Information:

The C-terminal polyhistidine and FLAG tags are italicized.

QAFHLGKCPNPPVQENFDVNKYLGRWYEIEKIPTTFE  
NGRCIQANYSLMENGKIKVLNQELRADGTVNQIEGEA  
TPVNLTEPAKLEVKFSWFMPSPAPYWILATDYENYALV  
YSCTCIIQLFHVDFAWILARNPNLPPETVDSLKNILTSN  
NIDVKKMTVTDQVNCPLSDYKDDDDKGHHHHHHH  
HGGQ

### 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. Drayna, D. et al., Cloning and expression of human apolipoprotein D cDNA. *J. Biol. Chem.*, **261 (35)**, 16535–16539 (1987).
2. Muffat, J., and Walker, D.W., Apolipoprotein D: an overview of its role in aging and age-related diseases. *Cell Cycle*, **9 (2)**, 269–273 (2010).
3. Appari, M. et al., Apolipoprotein D (APOD) is a putative biomarker of androgen receptor function in androgen insensitivity syndrome. *J. Mol. Med. (Berl.)*, **87(6)**, 623-632 (2009).

## Legal Information

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