

Product Information

SILu™Prot IL6, Interleukin 6, human recombinant, expressed in HEK cells SIL MS Protein Standard, ¹³C- and ¹⁵N-labeled

Catalog Number **MSST0017**

Storage Temperature -20 °C

Synonyms: IL-6, B-cell stimulatory factor 2 (BSF-2), CTL differentiation factor (CDF), Interferon beta-2 (IFN-beta-2), Hybridoma growth factor

Product Description

SILu™Prot IL-6 is a recombinant, stable isotope-labeled human IL-6 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 IL-6 in mass spectrometry. SILu™Prot IL-6 is a monomer of 183 amino acids, with a calculated molecular mass of 21.0 kDa. It contains no tags.

IL-6 is an abundant cytokine, which is crucial for leukocyte and endothelial cell activation.¹ IL-6 is one of the major cytokines that are implicated clinically as biomarkers in ACS (Acute Coronary Syndrome).¹ Its pathophysiological contribution to ACS is the induction of acute-phase response.¹ Patients with ACS have increased circulating levels of IL-6 compared with those patients who have stable angina.² Among patients with unstable angina, an increase in IL-6 levels that occurred 48 hours after admission compared with the admission value was associated with the combined end point of death, myocardial infarction (MI), or refractory angina.³ High levels of IL-6 are also related to cardiovascular disease, heart attack, and stroke.⁴

Each vial contains 10–13 µg of SILu™Prot IL6 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 115% for this protein.

Identity: Confirmed by peptide mapping

Purity: ≥95% (SDS-PAGE)

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

UniProt: P05231

Sequence Information

VPPGEDSKDVAAPHRQPLTSSERIDKQIRYILDGISAL
RKETCNKSNMCESSKEALAENLNLPKMAEKDGC
FQSGFNEETCLVKIITGLLEFEVYLEYLQNRFESSEEQA
RAVQMSTKVLIQFLQKKAKNLDAITTPDPTTNASLLTK
LQAQNQWLQDMTTHLILRSFKEFLQSSLRALRQM

Transitions for three peptides (underlined) suggested for selected reaction monitoring analysis (SRM) are provided 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. Armstrong, E.J. et al., Inflammatory biomarkers in acute coronary syndromes: Part I: Introduction and cytokines. *Circulation*, **113**, e72-e75 (2006).
2. Biasucci, L. et al., Elevated levels of interleukin-6 in unstable angina. *Circulation*, **94**, 874–877 (1996).
3. Biasucci, L. et al., Increasing levels of interleukin (IL)-1Ra and IL-6 during the first 2 days of hospitalization in unstable angina are associated with increased risk of in-hospital coronary events. *Circulation*, **99**, 2079–2084 (1999).
4. Ridker, P.M. et al., Inflammation, aspirin, and the risk of cardiovascular disease in apparently healthy men. *The New England Journal of Medicine*, **336**, 973-979 (1997).

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Legal Information

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