

Product description

Human alpha fetoprotein (AFP) is a glycoprotein derived mainly from fetal liver. It is a well-known diagnostic biomarker used in medicine to detect fetal developmental anomalies. Labelled AFP is a recombinant protein, stable isotope labelled (SIL), designed for use as an internal standard for quantitative analysis of AFP by mass spectrometry (MS).

Synonyms: Alpha-1-fetoprotein, Alpha-fetoglobulin



Product name Human AFP
SIL-protein



Catalog number AF099901

Uniprot ID P02771

Protein sequence

RTLHRNEYGIASILDSYQCTAEISLADLATIFFAQFVQEATYKEVSKMVKDALTAIEKPTGDEQSSGCLNQLPFLLEELCHEKEILEKYGHSDCCS
QSEEGRHNCFLAHKKPTPASIPLFQVPEPVTSCEAYEEDRETFMNFKIYIARRHPFLYAPTILLWAARYDKIIPSCCKAENAVECFQTKAATVTK
ELRESSLLNQHACAVMKNFGRTRTFQAITVTKLSQKFTKVNFEIQKLVLDVAHVHEHCCRGDVLDCLDQGEKIMS YICSQQDTLSNKITECKL
TTLERGQCIIHAENDEKPEGLSPNLNRF LGDRDFNQFSSGEKNIFLASFVHEYSRRHPQLAVSVILRVAKGYQELLEKCFQTENPLECQDKGEE
LQKYIQESQALAKRSCGLFQKLG EYLLQNAFLVAYTKKAPQLTSSSELMATR KMAATAATCCQLSEDKLLACGEGAADIIIGHLCIRHEMTPVNP
GVGQCCTSSYANRRPCFSSLVVDETYVPPAFSDDKFIFHKDLCQAQGVALQTMKQEFILNLVKQKPQITEEQLEAVIADFSGLLEKCCQGQEQE
VCFAEEGQKLISKTRAALGVHHHHHHHH

Product features and protocols

Key features

- 1** Purity >90%
as determined by SDS-PAGE
- 2** Labelling Arg-¹³C₆, ¹⁵N₄ | Lys-¹³C₆, ¹⁵N₂
- 3** Isotopic incorporation >99%
as determined by LC-MS/MS
analysis of digested SIL-protein

Other features

Predicted MW	67.6 kDa
Expression System	HEK (Human Embryonic Kidney) cell line
Purification Tag	PolyHis tag at the C-terminus end
Protein content	Determined by BCA assay with BSA as standard
Formulation	Lyophilized from 20 mM Tris pH=7.6, 0.1 M NaCl buffer

Product preparation

For product preparation we recommend the following steps:

- Briefly centrifuge the tube before opening
- Reconstitute by adding the appropriate volume of ultrapure water for a final concentration of 200 µg/ml (e.g. 50 µl for 10 µg or 250 µl for 50 µg conditioning)
- Vortex gently to insure complete dissolution
- Wait 15 minutes at room temperature before proceeding further
- Vortex gently again and centrifuge briefly

Product storage

The product is lyophilized and shipped at ambient temperature. **Store at -80 °C upon receipt.**

After reconstitution, the protein can be preserved at 4°C for a few weeks.

Avoid multiple freeze-thaw cycles

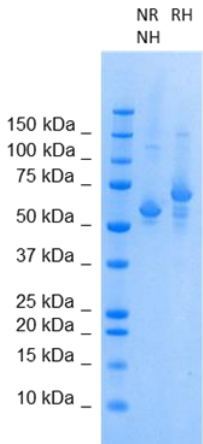
How to use our product



SIL proteins allow to overcome the process variability since they are added at the very beginning of a sample preparation. This has potential positive impact on your analyte quantification, especially if the analyte interacts with other species commonly present within the matrix (1).



Supporting information



SDS-PAGE gel analysis of AFP protein in non-reduced/ non-heated conditions (NR/NH) and Reduced/Heated conditions (RH) and stained with Coomassie blue.

References

1. **G.Picard, D. Lebert, et al.** PSAQ standards for accurate MS-based quantification of proteins: from the concept to biomedical applications, *J. Mass Spectrom.* 2012, 47, 1353-1363



The product is intended for research use only. Not for diagnostic or therapeutic use.

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