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# Product Information

**SILu™Prot Insulin, human recombinant, expressed in *P. pastoris* SIL MS Protein Standard, $^{15}$N-labeled**

Catalog Number **MSST0064**
Storage Temperature –20 °C

## Product Description

SILu™Prot Insulin is a recombinant, $^{15}$N stable isotope-labeled, human insulin (INS), expressed in *P. pastoris*. Insulin is a small protein consisting of two polypeptide chains (A chain and B Chain) interconnected by two disulfide bonds.[1]

| | $^{15}$N labeled Insulin (**) | Native Insulin (***) | Measured/ Theoretical Mass shift (****) |
|---|---|---|---|
| A chain (*) | 2408.5 | 2383.7 | 24.8/25.0 |
| B chain (*) | 3468.7 | 3429.9 | 38.8/39.0 |
| Whole molecule | 5871.2 | 5807.6 | 63.6/64.0 |

* Reduced form
** Average mass measured on qTOF mass spectrometer
*** Theoretical average mass
**** Theoretical mass shift assuming 100% $^{15}$N incorporation

Each vial contains 10–13 μg of SILu™Prot Insulin standard, lyophilized from a solution of 1% acetic acid. Vial content was determined by HPLC using unlabeled insulin as a calibrator. Quantitation by Amino Acid Analysis is 90% for this protein.

Purity: ≥95% (HPLC)

Heavy nitrogen incorporation efficiency: ≥97% (MS)

UniProt: P01308

Sequence Information:
A chain:
GIVEQCCTSICSLYQLENYCN

B chain:(*****)
FVNQHLCGSHLVEALYLVCGERGFFYTPKT
(*****) All amino acids are labeled with $^{15}$N except Thr$^{30}$ (B Chain)

## 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 with 2% acetic acid to the 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.

## Reference

1. Nikol, D.S., and Smith, L.F., Amino Acid sequence of human insulin. Nature, **187**, 483–485 (1960).



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