Product Information

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

Catalog Number MSST0064
Storage Temperature −20 °C

Product Description
SILu™Prot Insulin is a recombinant, ¹⁵N 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

<table>
<thead>
<tr>
<th></th>
<th>¹⁵N labeled Insulin (**)</th>
<th>Native Insulin (***)</th>
<th>Measured/ Theoretical Mass shift (****)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A chain</td>
<td>2408.5</td>
<td>2383.7</td>
<td>24.8/25.0</td>
</tr>
<tr>
<td>B chain</td>
<td>3468.7</td>
<td>3429.9</td>
<td>38.8/39.0</td>
</tr>
<tr>
<td>Whole molecule</td>
<td>5871.2</td>
<td>5807.6</td>
<td>63.6/64.0</td>
</tr>
</tbody>
</table>

* Reduced form
** Average mass measured on qTOF mass spectrometer
*** Theoretical average mass
**** Theoretical mass shift assuming 100% ¹⁵N 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 ¹⁵N except Thr³⁰ (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