

## Product description

Human Growth hormone (hGH), is a peptide hormone which plays an important role in growth control. Its major role in stimulating body growth is to stimulate the liver and other tissues to secrete IGF-1. It stimulates both the differentiation and proliferation of myoblasts. It also stimulates amino acid uptake and protein synthesis in muscle and other tissues.

Labelled hGH is a recombinant protein, stable isotope labelled (SIL), designed for use as an internal standard for quantitative analysis of hGH by mass spectrometry (MS).

**Synonyms:** Somatotropin, Pituitary growth hormone



**Product name** Human GH SIL-protein



**Catalog number** GH596291

**Uniprot ID** P01241

## Protein sequence

FPTIPLSRFLFDNAMLRAHRLHQLAFDITYQEFEEAYIPKEQKYSFLQNPQTSLCFSESIPTSPNREETQQKSNLELLRISLLLIQSWLEPVQFLRSVF  
ANSLVYGASDSNVYDLLKDLLEGIQTLMGRLEDGSPRTGQIFKQYTSKFDNNSHNDDALLKNYGLLYCFRKMDMDKVFTRIVQCRSVEGSCGF

## Product features and protocols

### Key features

- 1 Purity >95%  
as determined by SDS-PAGE
- 2 Labelling Arg-<sup>13</sup>C<sub>6</sub>, <sup>15</sup>N<sub>4</sub> | Lys-<sup>13</sup>C<sub>6</sub>, <sup>15</sup>N<sub>2</sub>
- 3 Isotopic incorporation >99%  
as determined by LC-MS/MS analysis of digested SIL-protein

### Other features

Predicted MW	22.1 kDa
Expression System	<i>E. coli</i>
Purification Tag	No tag
Protein content	Determined by BCA assay with BSA as standard
Formulation	Lyophilized from 10 mM Sodium phosphate pH=8 ; 4% Mannitol buffer

## Product preparation

For product preparation we recommend the following steps:

1. Briefly centrifuge the tube before opening
2. 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)
3. Vortex gently to insure complete dissolution
4. Wait 15 minutes at room temperature before proceeding further
5. 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**

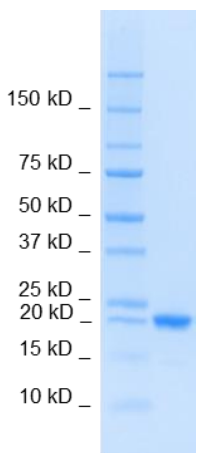
## How to use our product



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 hGH protein in 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
2. **C. Pritchard et al.** Quantification of human growth hormone in serum with a labeled protein as an internal standard: essential considerations, *Anal Chem.* 2014, 86, 6525-32



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

## Legal

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