

# Recombinant Human Insulin Protein

Catalog No.: RP02930LQ **Recombinant**

## Sequence Information

Species	Gene ID	Swiss Prot
Human	3630	P01308

### Tags

No tag

### Synonyms

IDDM;IDDM1;IDDM2;ILPR;IRDN;MODY10;INS;Insulin;insulin

## Product Information

Source	Purification
Yeast	> 95% by SDS-PAGE.

Calculated MW	Observed MW
7.1 kDa	6 kDa

### Endotoxin

Please contact us for more information.

### Formulation

Supplied as a 0.22 µm filtered solution in PBS, pH 7.4. Contact us for customized product form or formulation.

### Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

## Contact

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## Background

INS (Insulin) is a Protein Coding gene. This gene encodes insulin, a peptide hormone that plays a vital role in the regulation of carbohydrate and lipid metabolism. After removal of the precursor signal peptide, proinsulin is post-translationally cleaved into three peptides: the B chain and A chain peptides, which are covalently linked via two disulfide bonds to form insulin, and C-peptide. The binding of insulin to the insulin receptor (INSR) stimulates glucose uptake. Diseases associated with INS include Hyperproinsulinemia and Maturity-Onset Diabetes Of The Young, Type 10. A multitude of mutant alleles with phenotypic effects has been identified, including insulin-dependent diabetes mellitus, permanent neonatal diabetes mellitus, maturity-onset diabetes of the young type 10, and hyperproinsulinemia.

## Basic Information

### Description

Recombinant Human Insulin Protein is produced by Yeast expression system. The target protein is expressed with sequence ((Phe25-Lys53)AAK(Gly90-Asn110)) of human Insulin (Accession #NP\_000198.1) fused with no additional amino acid.

### Bio-Activity

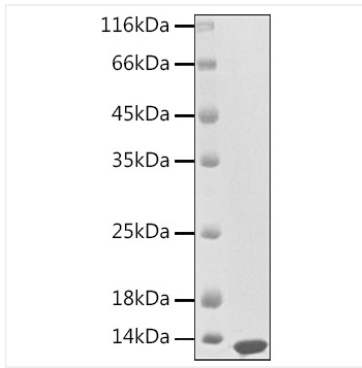
Measured in a serum-free cell proliferation assay using MCF-7 human breast cancer cells. The ED<sub>50</sub> for this effect is typically 0.2-1 µg/mL.

### Storage

Store at -70°C. This product is stable at ≤ -70°C for up to 1 year from the date of receipt. For optimal storage, aliquot into smaller quantities after centrifugation and store at recommended temperature. Avoid repeated freeze-thaw cycles. Avoid repeated freeze/thaw cycles.

## Validation Data

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Recombinant Human Insulin Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 7 kDa.