

## Product datasheet for PH302701

### Insulin (INS) (NM\_000207) Human Mass Spec Standard

#### Product data:

Product Type:	Mass Spec Standards
Description:	INS MS Standard C13 and N15-labeled recombinant protein (NP_000198)
Species:	Human
Expression Host:	HEK293
Expression cDNA Clone or AA Sequence:	RC202701
Predicted MW:	12 kDa
Protein Sequence:	>RC202701 protein sequence Red=Cloning site Green=Tags(s)  MALWMRLLPLLALLLWGPDPAAAFVNQHLCGSHLVEALYLVCGERGFFYTPKTRREAEDLQVGGVELGG GPGAGSLQPLALEGSLQKRGIVEQCCTSICSLYQLENYCN  TRTRPLEQKLISEEDLAANDILDYKDDDDKV
Tag:	C-Myc/DDK
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Labeling Method:	Labeled with [U- 13C6, 15N4]-L-Arginine and [U- 13C6, 15N2]-L-Lysine
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3
Storage:	Store at -80°C. Avoid repeated freeze-thaw cycles.
Stability:	Stable for 3 months from receipt of products under proper storage and handling conditions.
RefSeq:	<a href="#">NP_000198</a>
RefSeq Size:	469
RefSeq ORF:	330
Synonyms:	IDDM; IDDM1; IDDM2; ILPR; IRDN; MODY10; PNDM4
Locus ID:	3630
UniProt ID:	<a href="#">P01308</a> , <a href="#">I3WAC9</a>
Cytogenetics:	11p15.5



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**Summary:**

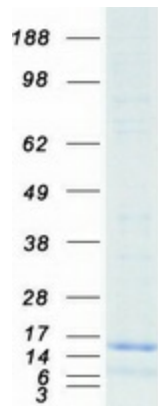
This gene encodes insulin, a peptide hormone that plays a vital role in the regulation of carbohydrate and lipid metabolism. After removal of the precursor signal peptide, proinsulin is post-translationally cleaved into three peptides: the B chain and A chain peptides, which are covalently linked via two disulfide bonds to form insulin, and C-peptide. Binding of insulin to the insulin receptor (INSR) stimulates glucose uptake. A multitude of mutant alleles with phenotypic effects have been identified, including insulin-dependent diabetes mellitus, permanent neonatal diabetes diabetes mellitus, maturity-onset diabetes of the young type 10 and hyperproinsulinemia. There is a read-through gene, INS-IGF2, which overlaps with this gene at the 5' region and with the IGF2 gene at the 3' region. [provided by RefSeq, May 2020]

**Protein Families:**

Druggable Genome, ES Cell Differentiation/IPS, Secreted Protein

**Protein Pathways:**

Insulin signaling pathway, Maturity onset diabetes of the young, mTOR signaling pathway, Oocyte meiosis, Progesterone-mediated oocyte maturation, Prostate cancer, Regulation of actin cytoskeleton, Regulation of autophagy, Type I diabetes mellitus, Type II diabetes mellitus

**Product images:**

Coomassie blue staining of purified INS protein (Cat# [TP302701]). The protein was produced from HEK293T cells transfected with INS cDNA clone (Cat# [RC202701]) using MegaTran 2.0 (Cat# [TT210002]).