

Recombinant Human INS therapeutic protein(Insulin glargine)

Cat. No. Insulin-P057H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Insulin glargine is produced by recombinant DNA technology using a non-pathogenic laboratory strain of Escherichia coli (K12) as the production organism. It is an analogue of human insulin made by replacing the asparagine residue at position A21 of the A-chain with glycine and adding two arginines to the C-terminus (positions B31 and 32) of the B-chain. The resulting protein is soluble at pH 4 and forms microprecipitates at physiological pH 7.4. Small amounts of insulin glargine are slowly released from microprecipitates giving the drug a long duration of action (up to 24 hours) and no pronounced peak concentration.

Species Human

Source E.coli

ProteinLength 32aa

Description

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. 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. Alternative splicing results in multiple transcript variants.

Molecular Mass 60.6 Kda

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AA Sequence	FVNQHLCGSHLVEALYLVCGERGFFYTPKTRR
Endotoxin	< 1.0 EU per µg of the protein
Purity	>95%
Storage	Can be stored at +4 centigrade short term (1-2weeks). For long term storage, aliquot and store at -20 centigrade or -70 centigrade. Avoidrepeated freezing and thawing cycles.
Alias	INS; ILPR; IRDN; IDDM2; Insulin glargine

GENE INFORMATION

Gene Name	INS insulin [Homo sapiens]
Official Symbol	INS
Synonyms	INS; insulin; proinsulin; ILPR; IRDN; IDDM2; MODY10;
Gene ID	3630
mRNA Refseq	NM_000207
Protein Refseq	NP_000198
UniProt ID	P01308
Chromosome Location	11p15.5
Pathway	ATF-2 transcription factor network, organism-specific biosystem; Adipogenesis,

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organism-specific biosystem; Aldosterone-regulated sodium reabsorption, organism-specific biosystem; Aldosterone-regulated sodium reabsorption, conserved biosystem; Amyloids, organism-specific biosystem; Arf6 trafficking events, organism-specific biosystem; Developmental Biology, organism-specific biosystem;

Function

hormone activity; hormone activity; hormone activity; insulin receptor binding; insulin receptor binding; insulin-like growth factor receptor binding; protein binding;

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