

Insulin Protein, Bovine

Cat. No.:	HY-P701240
Synonyms:	Insulin; INS; IDDM; ILPR; IRDN; MODY10
Species:	Bovine
Source:	P. pastoris
Accession:	P01317 (F25-A54&G85-N105)
Gene ID:	/
Molecular Weight:	Approximately 6 kDa

PROPERTIES

AA Sequence	A F V N Q H L C G S H L V E A L Y L V C G E R G F F Y T P K A & G I V E Q C C A S V C S L Y Q L E N Y C N
Biological Activity	Measure by its ability by a dose-response proliferation assay using human MCF7 epithelial cells. The ED50 for this effect is <1.0 µg/mL. The specific activity of this protein is > 1.0 × 10 ³ IU/mg. (It is recommended to experimentally determine the optimal concentration for each specific application by performing a dose response assay.)
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 10 mM Citric acid, pH 2.0-3.0.
Endotoxin Level	< 0.1 EU/µg of protein by gel clotting method
Reconstitution	It is not recommended to reconstitute to a concentration less than 1mg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Insulin, a pivotal hormone in glucose homeostasis, plays a crucial role in reducing blood glucose concentration. Its actions extend beyond glycemic control, as it enhances cell permeability to monosaccharides, amino acids, and fatty acids. Furthermore, insulin facilitates metabolic processes such as glycolysis, the pentose phosphate cycle, and glycogen synthesis in the liver, contributing to overall energy regulation. Structurally, insulin is composed of a heterodimeric arrangement, consisting of a B chain and an A chain connected by two disulfide bonds. The multifaceted functions of insulin underscore its significance in orchestrating metabolic responses and maintaining physiological balance.
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Caution: Product has not been fully validated for medical applications. For research use only.

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