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Insulin, Bovine

Catalog # PVGS1961

Specification

Insulin, Bovine - Product Information

Primary Accession P01317

Species
Bovine

Sequence
Phe25-Ala54 & Gly85-Asn105

Purity
≥ 95% as analyzed by SDS-PAGE

Endotoxin Level
< 0.1 EU/ µg of protein by gel clotting method

Biological Activity
ED₅₀ < 1.00 µg/ml as determined by a dose-response proliferation assay using human MCF7 epithelial cells. Based on the ED₅₀, the calculated specific activity is approximately > 1× 10³ IU/mg. It is recommended to experimentally determine the optimal concentration for each specific application by performing a dose response assay.

Expression System
P. pastoris

Theoretical Molecular Weight
5.72 kDa

Formulation **Lyophilized from a 0.2 µm filtered solution in 10 mM Citric acid, pH 2.0-3.0.**

Reconstitution
Before opening, centrifuge the vial briefly to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH₂O up to 1 mg/ml.

Storage & Stability
Upon receiving, the lyophilized product remains stable for up to 6 months at lower than -70 °C. Upon reconstitution, the product is stable for up to 1 week at 4 °C or up to 3 months at -20 °C. Avoid repeated freeze-thaw cycles by making single-use aliquots before the solution is stored at -20 °C.

Insulin, Bovine - Additional Information

Other Names
Insulin, Insulin B chain, Insulin A chain, INS

Target Background
Insulin is a peptide hormone produced exclusively by beta cells of the pancreatic islets. The

mature form of insulin is a heterodimer of a B chain and an A chain linked by two disulfide bonds. The amino acid sequence of insulin is strongly conserved and varies only slightly between species. Bovine insulin differs from human in only three amino acid residues, and porcine insulin in one. Insulin is considered to be the main anabolic hormone of the body and regulates the metabolism of carbohydrates, fats and protein by promoting the absorption of glucose from the blood into liver, fat and skeletal muscle cells. Decreased or absent insulin activity results in diabetes. Recombinant insulin has been widely used for treatment of diabetes.

Insulin, Bovine - Protein Information

Name INS

Function
Insulin decreases blood glucose concentration. It increases cell permeability to monosaccharides, amino acids and fatty acids. It accelerates glycolysis, the pentose phosphate cycle, and glycogen synthesis in liver.

Cellular Location
Secreted.

Insulin, Bovine - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Insulin, Bovine - Images