10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Insulin, Bovine

Catalog # PVGS1961

Product Information

Primary Accession	P01317
Species	Bovine
Sequence	Phe25-Ala54 & Gly85-Asn105
Purity	≥ 95% as analyzed by SDS-PAGE
Endotoxin Level	
Biological Activity	$ED_{50\ 50}$, the calculated specific activity is approximately > 1×10^3 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 □m 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 ddH_2O 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.

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.

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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.