

Rev03
Update: Aug,08,2025

DATASHEET

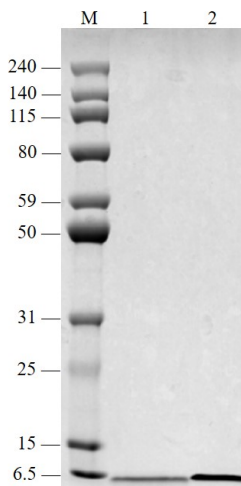
Insulin, Bovine

Cat. No.: Z03735

Product Introduction

Species	Bovine
Protein Construction	Insulin (Phe25-Ala54 & Gly85-Asn105) Accession # P01317
Purity	≥ 95% as analyzed by SDS-PAGE
Endotoxin Level	< 0.1 EU/μg of protein by gel clotting method
Biological Activity	ED ₅₀ < 1.00 μg/ml as determined by a dose-response proliferation assay using human MCF7 epithelial cells. Based on the ED 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
Apparent Molecular Weight	~6 kDa, on SDS-PAGE under reducing conditions.
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 ddH ₂ O 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.

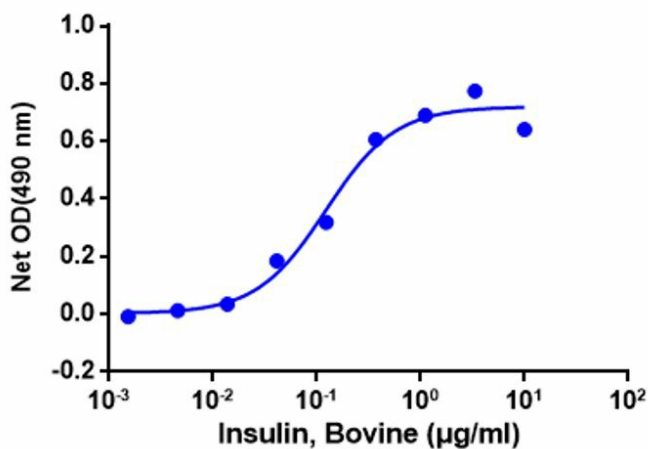
Examples



Lane 1: 2 µg of Insulin, Bovine, reducing (R)

Lane 2: 2 µg of Insulin, Bovine, non-reducing (NR)

The purity is greater than 95% as analyzed by SDS-PAGE



The ED₅₀ as determined by a cell proliferation assay using human MCF7 cells is 0.14 µg/ml.

Background

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.

Synonyms : Insulin

For laboratory research use only. Direct human use, including taking orally and injection and clinical use are forbidden.

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