

Native Bovine Insulin

Cat. No. INS-5435B **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Native Bovine INS is prepared from Bovine pancreas.
Species	Bovine
Source	Bovine pancreas
Description	INS is a polypeptide hormone produced in the pancreatic islets of Langerhans that has a molecular weight of ~5800 Da. INS primarily regulates the uptake and storage of glucose in cellular systems. It also plays a related role in the metabolism of certain amino acids and fatty acids. Bovine INS is remarkably similar to human insulin, differing in molecular structure by only three amino acid residues.
Form	Lyophilized
Molecular Mass	5.733 kDa
Storage	Store desiccated at -20°C. Alternatively, it can be stored at 2-4°C for up to 1 year if it is sterile-filtered through a low protein binding membrane. Avoid repeated freeze-thaw cycles. Protect from light.
Reconstitution	Centrifuge vial prior to opening. Insulin has low solubility at neutral pH. It can be solubilized at 2 mg/ml in dilute acetic acid or hydrochloric acid, pH 2-3. INS solutions cannot be autoclaved. Insulin can also be solubilized in 125 mM NaHCO ₃ . However, alkaline stock solutions are not recommended since high pH increases the rate of deamidation and aggregation.

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GENE INFORMATION

Gene Name	INS insulin [Bos taurus]
Official Symbol	INS
Synonyms	insulin; proinsulin
Gene ID	280829
mRNA Refseq	NM_001185126
Protein Refseq	NP_001172055
Chromosome Location	chromosome: 29
Pathway	AMPK signaling pathway, organism-specific biosystem; Adipogenesis, organism-specific biosystem; Disease, organism-specific biosystem
Function	hormone activity; identical protein binding; protein binding

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