

Insulin(cattle)

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|-----------------------------|--|
| Cat. No.: | HY-P1156 |
| CAS No.: | 11070-73-8 |
| Molecular Formula: | C ₂₅₄ H ₃₇₇ N ₆₅ O ₇₅ S ₆ |
| Molecular Weight: | 5733.49 |
| Sequence: | Phe-Val-Asn-Gln-His-Leu-Cys-Gly-Ser-His-Leu-Val-Glu-Ala-Leu-Tyr-Leu-Val-Cys-Gly-Glu-Arg-Gly-Phe-Phe-Tyr-Thr-Pro-Lys-Ala. Gly-Ile-Val-Glu-Gln-Cys-Cys-Ala-Ser-Val-Cys-Ser-Leu-Tyr-Gln-Leu-Glu-Asn-Tyr-Cys-Asn (Disulfide bridge: Cys7-Cys7', Cys19-Cys20', Cys6'-Cys6') |
| Sequence Shortening: | FVNQHLGSGSHLVEALYLVCGERGFFYTPKA. GIVEQCCASVCSLYQLENYCN (Disulfide bridge: Cys7-Cys7', Cys19-Cys20', Cys6'-Cys11') |
| Target: | Insulin Receptor |
| Pathway: | Protein Tyrosine Kinase/RTK |
| Storage: | Powder -80°C 2 years -20°C 1 year |

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* The compound is unstable in solutions, freshly prepared is recommended.

SOLVENT & SOLUBILITY

In Vitro

H₂O : 11 mg/mL (1.92 mM; ultrasonic and adjust pH to 2 with HCl)

| Preparing Stock Solutions | Solvent Concentration | Mass | | |
|---------------------------|--------------------------|-----------|-----------|-----------|
| | | 1 mg | 5 mg | 10 mg |
| | 1 mM | 0.1744 mL | 0.8721 mL | 1.7441 mL |
| | 5 mM | --- | --- | --- |
| | 10 mM | --- | --- | --- |

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Insulin cattle (Insulin from bovine pancreas) is a two-chain polypeptide hormone produced in vivo in the pancreatic β cells. Insulin cattle has often been used as growth supplement in culturing cells.

In Vitro

Two-chain polypeptide hormone produced by the β -cells of pancreatic islets. The α and β chains are joined by two interchain disulfide bonds. The α chain contains an intrachain disulfide bond. Insulin regulates glucose uptake into muscle and fat cells by recruiting membrane glucose transporter Glut-4 to cell surface. Insulin cattle has often been used as growth supplement in culturing cells at the concentration ranging from 1 to 10 μ g/mL of medium. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Yousefi R, et al. Aspirin-mediated acetylation induces structural alteration and aggregation of bovine pancreaticinsulin. J Biomol Struct Dyn. 2016;34(2):362-75.

Caution: Product has not been fully validated for medical applications. For research use only.