Bovine Insulin
Cell Culture Tested

Product Code: TC431

Product Description:
Molecular Weight: 5733.49
Molecular Formula: C_{254}H_{377}N_{65}O_{75}S_{6}
CAS No.: 11070-73-8

Insulin, a two-chain polypeptide of approximately 5800 Dalton, is produced by β- cells of the islets of Langerhans of the pancreas. It consists of two chains α and β, joined by two interchain disulphide bonds. It has a profound effect in the metabolism of carbohydrates, fats and proteins, and inhibits the breakdown of glycogen, protein and fat.

In cell culture, insulin has been considered as a key factor in the growth regulation and differentiation of cells, and hence, it is often included as a media supplement. It is an anabolic agent required to keep the cells healthy and fully responsive to mitogenic stimuli, especially when the cells are sparse and maintained in a low serum concentration. Therefore, it aids as a survival promoting factor in cell culture media. Bovine insulin is used as a supplement in serum free media formulations typically at a concentration of 1-10μg/ml.

Directions:
Preparation instructions:
Bovine insulin is soluble in water at 2mg/ml at pH 2.0. Solutions of desired concentrations can be prepared and sterilized by filtering through a sterile membrane filter with porosity 0.22 microns or less.

Quality Control:
Appearance
White to Off-white to brown powder
Solubility
Clear colourless solution at 2mg/ml in water adjusted to pH 2 with 0.1N HCl or 0.1M acetic acid
Assay
NLT 97%
Activity in IU/mg
NLT 26 IU/mg
Cell Culture Test
Passes

Storage and Shelf Life:
Store insulin powder and solutions below -20°C. Powder is stable at room temperature upto 3 weeks. Stock solution should be stored frozen at -20°C in single use aliquots. Repeated freezing and thawing should be avoided. Use before expiry date given on the product label. DO NOT autoclave insulin solutions. Insulin can be stored at 2-8°C for upto 12 months after filtration through low protein binding membrane or addition of bacteriostatic agent such as 0.1% thiomerosal or sodium azide.

Disclaimer:
User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ Publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.