Insulin Solution, 10 mg/mL

Contains 10 mg/mL Insulin (human, recombinant) in 10 mM HCl

Cat. No. CINS001 | Size: 20 ML

1. Product Description

Insulin is produced through the processes of preproinsulin and proinsulin in the cells of the islets of Langerhans in the pancreas. It is a small protein hormone consisting of 51 amino acids with a molecular weight of 5.8 kDa. In the body, when blood glucose levels rise, insulin is secreted to bring glucose into cells, lowering blood glucose. It suppresses glucose production in the liver and promotes glucose uptake by peripheral tissues including muscle. In addition, it regulates the cellular uptake, utilization, and storage of amino acids and fatty acids, and inhibits the breakdown of glycogen, fat, and protein as well as ketone production. Therefore, adding insulin during cell culture aids cell growth and proliferation, and it is one of the primary components considered under serum-free conditions or when reducing serum.

2. Composition

Component	mg/L
Insulin (human, recombinant)	10.0
Hydrochloric Acid (HCl)	10 mM

3. Product Quality Specifications

Appearance	pH	Osmolality	Sterility
Colorless clear liquid	Result Reported	20 ~ 70 mOsm/kg H_2O	Sterile

4. Storage Conditions and Precautions

Protect from direct light and store frozen (-20°C). Product degradation may appear as precipitates, floating particles, or color change; discard if any are observed. Repeated freezing and thawing cycles may cause degradation, and the addition of extra substances may also cause degradation.

5. Usage Instructions and Precautions

Because this product is temperature-sensitive, thaw it primarily at low temperatures and warm (incubate) it at the actual working temperature (e.g., 37°C) for the minimum necessary time only before use. This product is a sterile solution. Open the cap only in a sterile environment (e.g., a clean bench) using aseptic technique. It is recommended to use the entire contents after opening; otherwise, aliquot into a suitable sterile container and store properly.