abcam

Product datasheet

Recombinant human Insulin protein (Active) ab123768

2 Abreviews 1 Image

Description

Product name	Recombinant human Insulin protein (Active)
Biological activity	ab123768 is fully biologically active when compared to World Health Organization (WHO) reference standard which is 28 units/mg.
Purity	> 98 % SDS-PAGE. > 98% SDS-PAGE. > 98% HPLC. Recombinant Insulin is purified by proprietary chromatographic techniques.
Expression system	Escherichia coli
Accession	P01308
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	GIVEQCCTSIC SLYQLENYCN FVNQHL CGSHLVEALY LVCGERGFFY TPKT
Predicted molecular weight	6 kDa
Additional sequence information	Two chain, non-glycosylated polypeptide chain. (aa 25-54 and 90-110)

Specifications

Our Abpromise guarantee covers the use of **ab123768** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Functional Studies SDS-PAGE HPLC
Form	Lyophilized
Additional notes	This product is manufactured by BioVision, an Abcam company and was previously called 4772 Insulin, human recombinant (E. coli). 4772-5 is the same size as the 5 mg size of ab123768. Endotoxin Level: <0.1 ng/µg of Insulin.

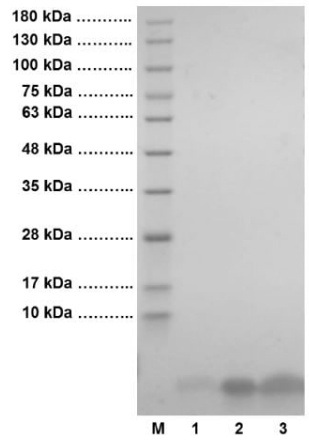
Preparation and Storage

Stability and Storage	Shipped at 4°C. Store at 4°C prior to reconstitution. Store at -20°C. Store under desiccating conditions. This product is an active protein and may elicit a biological response in vivo, handle with caution.
Reconstitution	Centrifuge the vial prior to opening. Reconstitute in 0.01 N HCl. The solution can then be diluted to other aqueous buffers. Upon reconstitution, ab123768 should be stored at 4°C for 2-7 days. For long-term storage, it is recommended to add a carrier protein (0.1% HSA or BSA) and store aliquots at –20°C or –70°C. Avoid freeze-thaw cycles.

General Info

Function	Insulin decreases blood glucose concentration. It increases cell permeability to monosaccharides, amino acids and fatty acids. It accelerates glycolysis, the pentose phosphate cycle, and glycogen synthesis in liver.
Involvement in disease	Defects in INS are the cause of familial hyperproinsulinemia (FHPRI) [MIM:176730]. Defects in INS are a cause of diabetes mellitus insulin-dependent type 2 (IDDM2) [MIM:125852]. IDDM2 is a multifactorial disorder of glucose homeostasis that is characterized by susceptibility to ketoacidosis in the absence of insulin therapy. Clinical fetaures are polydipsia, polyphagia and polyuria which result from hyperglycemia-induced osmotic diuresis and secondary thirst. These derangements result in long-term complications that affect the eyes, kidneys, nerves, and blood vessels. Defects in INS are a cause of diabetes mellitus permanent neonatal (PNDM) [MIM:606176]. PNDM is a rare form of diabetes distinct from childhood-onset autoimmune diabetes mellitus type 1. It is characterized by insulin-requiring hyperglycemia that is diagnosed within the first months of life. Permanent neonatal diabetes requires lifelong therapy. Defects in INS are a cause of maturity-onset diabetes of the young type 10 (MODY10) [MIM:613370]. MODY10 is a form of diabetes that is characterized by an autosomal dominant mode of inheritance, onset in childhood or early adulthood (usually before 25 years of age), a primary defect in insulin secretion and frequent insulin-independence at the beginning of the disease.
Sequence similarities	Belongs to the insulin family.
Cellular localization	Secreted.

Images



SDS-PAGE - Recombinant human Insulin protein (Active) (ab123768)

Under reducing conditions and stained with Coomassie Blue.

Lane 1: 2 µg Human Insulin.

Lane 2: 5 µg Human Insulin.

Lane 3: 10 µg Human Insulin.

Human recombinant insulin has a predicted MW of 5.81 kDa

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