Mouse Insulin protein, His tag (active)

Cat. No. GTX00291-pro

Applications	Functional Assay
Species	Mouse

Package
10 µg

Applications

Application Note

INS (Insulin) is a peptide hormone produced by beta cells of the pancreatic islets, which decreases blood glucose concentration and increases cell permeability to monosaccharides, amino acids and fatty acids. It has been reported that insulin triggers phosphorylation of a number of substrates by binding to its receptors, which was important for cell proliferation, cell cycle progression, cell division and differentiation. To detect the effect of Insulin on cell proliferation, MCF-7 cells were seeded into triplicate wells of 96-well plates at a density of 2000 cells/well and allowed to attach overnight, then the medium was replaced with serum-free standard DMEM prior to the addition of various concentrations of INS. After incubated for 48h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10 µl of CCK-8 solution was added to each well of the plate, then the absorbance at 450nm was measured using a microplate reader after incubating the plate for 1-4 hours at 37ºC. The dose-effect curve showed INS significantly promoted cell proliferation of MCF-7 cells. The ED_{50} for this effect is typically 11. 71-57. 11 ng/ml.

Observed MW (kDa)	10 kDa.

Properties

Form	Lyophilized powder
Buffer	Reconstitute with 20mM Tris and 150mM NaCl to 0.1-1.0mg/ml. Do not vortex. Lyophilized from 20mM Tris, 150mM NaCl, 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose.
Preservative	ProClin 300
Storage	For short-term storage (1-2 weeks), store at 4ºC. For long-term storage, store at -20ºC or below. After reconstitution, keep as concentrated solution. Avoid freeze-thaw cycles.
Region/Sequence	N-terminal His-Tag; Phe25~Ser54(B)+GGGGS+Gly90~Asn110(A) (NP_001172012.1)
Expression System	E. coli
Purity	> 97%
Endotoxin	< 1 EU/µg
Conjugation	Unconjugated
Note	For laboratory use only. Not for any clinical, therapeutic, or diagnostic use in humans or animals. Not for animal or human consumption.

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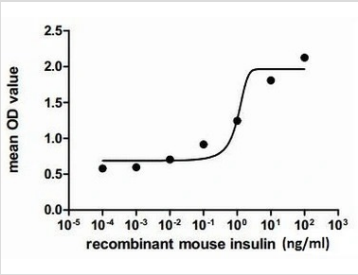
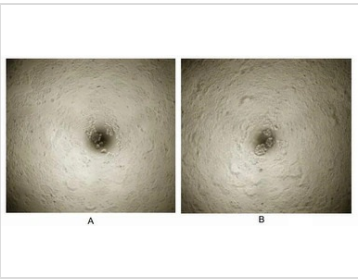
DATA IMAGES



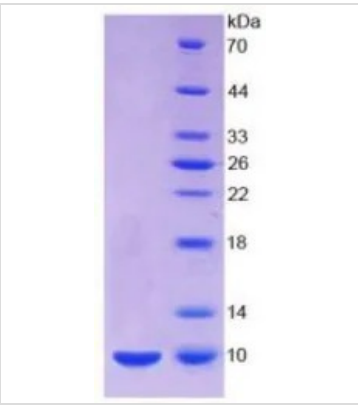
GTX00291-pro Functional Assay Image

The dose effect curve of GTX00291-pro Mouse Insulin protein (active) on MCF-7 cells. After incubation of Mouse Insulin protein (active) for 48 hrs, cell proliferation was measured by Cell Counting Kit-8 (CCK-8).



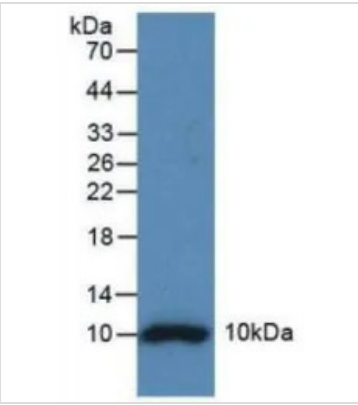
GTX00291-pro Functional Assay Image

Cell proliferation effect of GTX00291-pro Mouse Insulin protein (active).
(A) Unstimulated MCF-7 cells cultured in DMEM for 72hrs.
(B) MCF-7 cells cultured in DMEM, stimulated with 100 ng/ml INS for 72hrs.



GTX00291-pro Image

SDS-PAGE analysis of GTX00291-pro Mouse Insulin protein (active).



GTX00291-pro Image

WB analysis of GTX00291-pro Mouse Insulin protein (active).

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