IGF-I/IGF-1 Protein, Mouse

Cat. No.:	HY-P7070
Synonyms:	rMuIGF-1; IGF-IA; Somatamedin C; MGF; IGF-I
Species:	Mouse
Source:	E. coli
Accession:	P05017 (G49-A118)
Gene ID:	16000
Molecular Weight:	Approximately 7.8 kDa

PROPERTIES

AA Sequence	M G P E T L C G A E L V D A L Q F V C G P R G F Y F N K P T G Y G S S I R R A P Q T G I V D E C C F R S C D L R R L E M Y C A P L K P T K A A
Biological Activity	The ED_{50} is <10 ng/mL as measured by FDC-P1 cells, corresponding to a specific activity of >1 × 10^5 units/mg.
Appearance	Lyophilized powder
Formulation	Lyophilized after extensive dialysis against PBS.
Endotoxin Level	<0.2 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Insulin-like growth factor (IGF) system has been shown to modulate growth in many tissues, such as nervous tissue, lymphoid tissue, reproductive tissue, smooth muscle, endothelium, and bone. Insulin-like Growth factor-1 (IGF-I) is produced by osteoblasts, and its mitogenic effects are mediated by their binding to the IGF plasma membrane receptors. The IGF type 1 receptor binding to both IGF-I and IGF-II, is thought to be the predominate receptor involved in mediating the effects of these growth factors in most cell types, including osteoblasts[1]. Insulin-like growth factor-1 (IGF-1) is a neurotrophic factor capable of mediating neuroprotective and neuroplasticity mechanisms. Targeted overexpression of IGF-1 enhances the generation of hippocampal newborn neurons in brain-injured mice[2].

REFERENCES

[1]. Richman C, et al. Recombinant human insulin-like growth factor-binding protein-5 stimulates bone formation parameters in vitro and in vivo. Endocrinology. 1999 Oct;140(10):4699-705.

[2]. Carlson SW, et al. Central Infusion of Insulin-Like Growth Factor-1 Increases Hippocampal Neurogenesis and Improves Neurobehavioral Function after Traumatic Brain Injury. J Neurotrauma. 2018 Jul 1;35(13):1467-1480.

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

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA