Animal-Free IGF2 Protein, Human (His)

Cat. No.:	HY-P700094AF
Synonyms:	Somatamedin A; IGF-II
Species:	Human
Source:	E. coli
Accession:	P01344 (A25-E91)
Gene ID:	3481
Molecular Weight:	Approximately 8.28 kDa

PROPERTIES

AA Sequence	A Y R P S E T L C G G E L V D T L Q F V C G D R G F Y F S R P A S R V S R R S R G I V E E C C F R S C D L A L L E T Y C A T P A K S E
Biological Activity	Measure by its ability to induce MCF-7 cells proliferation. The ED_{50} for this effect is <3 ng/mL. The specific activity of recombinant human IGF-II is >3x10^5 IU/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a solution containing 1X PBS, pH 8.0.
Endotoxin Level	<0.1 EU per 1 μg of the protein by the LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
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	The IGF2 protein, a member of the insulin-like growth factor family, plays a pivotal role in promoting growth and influencing fetoplacental development, particularly as a major fetal growth hormone in mammals. It is regulated by placental lactogen and contributes to tissue differentiation. In adults, IGF2 is involved in glucose metabolism in adipose tissue, skeletal muscle, and the liver. Acting as a ligand for integrin, it facilitates IGF2 signaling and positively regulates the function of the myogenic transcription factor MYOD1, controlling muscle terminal differentiation. Additionally, IGF2 inhibits myoblast differentiation and modulates metabolism by increasing mitochondrial respiration rates. Moreover, in glucose-mediated co-secretion with insulin, IGF2's counterpart, preptin, acts as a physiological amplifier of glucose-mediated insulin secretion. Notably, IGF2 exhibits osteogenic properties, enhancing osteoblast mitogenic activity through the phosphoactivation of MAPK1 and

	MAPK3.

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

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