

IGFBP-2 Protein, Human (HEK293, His)

Cat. No.:	HY-P7368
Synonyms:	rHuIGF-BP-2, His; IBP-2; IGFBP-2; BP2
Species:	Human
Source:	HEK293
Accession:	P18065 (F40-Q325)
Gene ID:	3485
Molecular Weight:	Approximately 34.26 kDa

PROPERTIES

AA Sequence	<pre> F R C P P C T P E R L A A C G P P P V A P P A A V A A V A G G A R M P C A E L V R E P G C G C C S V C A R L E G E A C G V Y T P R C G Q G L R C Y P H P G S E L P L Q A L V M G E G T C E K R R D A E Y G A S P E Q V A D N G D D H S E G G L V E N H V D S T M N M L G G G G S A G R K P L K S G M K E L A V F R E K V T E Q H R Q M G K G G K H H L G L E E P K K L R P P P A R T P C Q Q E L D Q V L E R I S T M R L P D E R G P L E H L Y S L H I P N C D K H G L Y N L K Q C K M S L N G Q R G E C W C V N P N T G K L I Q G A P T I R G D P E C H L F Y N E Q Q E A R G V H T Q R M Q H H H H H H </pre>
Biological Activity	<ol style="list-style-type: none"> The ED₅₀ is <2 µg/mL as measured by FDC-P1 cells. Measured by its ability to inhibit the biological activity of IGF-II on MCF-7 human breast cancer cells. The ED₅₀ for this effect is 0.1501 µg/ml in the presence of 14 ng/mL rhIGF-II, corresponding to a specific activity is 6.662×10³ units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS or 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. 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 Binding Protein 2 (IGFBP2) is a member of the family of high-affinity binding proteins (IGFBP1-6) and appears to play a governing role in Insulin-like Growth Factor (IGF) regulation in the central nervous system^[1]. Insulin-like Growth Factor-Binding Proteins (IGFBPs) modulate the actions of secreted insulin-like growth facts (IGFs) by binding to them and increase the IGF half-life in the extracellular milieu and circulation by sequestering them in this bound form. IGFBPs either enhance or inhibit IGF actions on target cells; the individual IGFBPs either inhibit or potentiate IGF effects on osteoblasts in bone. Human Insulin-like Growth Factor-Binding Protein 5 (rhIGFBP-5) is a unique and most abundant IGFBP stored in bone, having a high specific binding affinity for hydroxyapatite and extracellular matrix proteins, therefore fixing it and its bound IGFs within bone. rhIGFBP-5 consistently stimulates osteoblast cell proliferation in vitro, thus increasing the number of osteoblasts^[2].

REFERENCES

- [1]. Milanesi E, et al. Insulin-like growth factor binding protein 2 in bipolar disorder: An expression study in peripheral tissues. *World J Biol Psychiatry*. 2018 Dec;19(8):610-618.
- [2]. 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.

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

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