



# Recombinant Human IGF-BP4

20150227BB



**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

<b>Cat.-no.:</b>	<b>100-200</b>
<b>Size:</b>	20 µg
<b>Lot. No.:</b>	According to product label

## Scientific Background

<b>Gene-ID (NCBI):</b>	3487
<b>Synonyms:</b>	IGFBP4; BP-4; IBP4; IGFBP-4; HT29-IGFBP

IGF-BPs control the distribution, function and activity of IGFs in various cell tissues and body fluids. IGF-BP4 is the major IGF-BP produced by osteoblasts, and is also found in the epidermis, ovarian follicles, and other tissues. IGF-BP4 inhibits the activity of IGF-I and IGF-II by binding in a manner that results in the formation of complexes with reduced ability to signal through cell surface IGF receptors. IGF-BP4 can inhibit the growth of chick pelvis cartilage and HT29 colon adenocarcinoma cells by blocking the mitogenic actions of IGFs, and has also been shown to reduce colony formation by colorectal cancer cells via an IGF independent pathway. The biological effects of IGF-BP4 can be regulated by Pregnancy Associated Plasma Protein A (PAPP-A), which reduces IGF-BP4/IGF binding affinity by proteolytically cleaving IGF-BP4. The modulation of IGF-BP4 activity by PAPP-A is an important component in the regulation of ovarian folliculogenesis and in the growth inhibition of responding ovarian cancer cells. Recombinant human IGF-BP4 is a 26.1 kDa protein consisting of 238 amino acid residues including the IGF-BP domain and thyroglobulin type-I domain.

## Sequence

```
DEAIHCPPCS EEKLARCRPP VGCEELVREP GCGCCATCAL  
GLGMPGCVYT PRCGSGLRCY PPRGVEKPLH TLMHGQGVCM  
ELAEIEAIQE SLQPSDKDEG DHPNNSFSPC SAHDRRCLQK  
HFAKIRDRST SGGKMKVNGA PREDARVPVQ GSCQSELHRA  
LERLAASQSR THEDLYIPI PNCDRNGNFH PKQCHPALDG  
QRGKWCVDR KTGVKLPGGL EPKGELDCHQ LADSFRE
```

## Database References

<b>Protein RefSeq:</b>	NP_001543.2
<b>Uniprot ID:</b>	P22692
<b>mRNA RefSeq:</b>	NM_001552

## Product Specifications

<b>Expressed in</b>	Insect cells
<b>Purity</b>	> 95% by SDS-PAGE & HPLC analyses
<b>Endotoxin level</b>	< 0.1 ng /µg of protein (<1EU/µg).
<b>Formulation</b>	lyophilized
<b>Length (aa):</b>	237
<b>MW:</b>	25.8 kDa

**Biological Activity:** Determined by its ability to inhibit IGF-I induced proliferation of FDC-P1 cells.



**AVOID REPEATED FREEZE AND THAW CYCLES!**