

# IGF-BP4, human recombinant

<b>CATALOG #:</b>	7166-10	10 µg
	7166-50	50 µg
<b>ALTERNATE NAMES:</b>	Insulin-like Growth Factor-Binding Protein 4, IBP-4, HT29-IGF-BP, colon cancer cell growth inhibitor	
<b>SOURCE:</b>	(BTI-Tn-5B1-4) Hi-5 Insect cells	
<b>PURITY:</b>	≥ 98% by SDS-PAGE gel and HPLC analyses	
<b>MOL. WEIGHT:</b>	25.7 kDa	
<b>ENDOTOXIN LEVEL:</b>	< 0.1 ng/µg of protein (<1EU/µg).	
<b>FORM:</b>	Lyophilized	
<b>FORMULATION:</b>	Sterile filtered through a 0.2 micron filter. Lyophilized from 1 x PBS, pH 7.2.	
<b>STORAGE CONDITIONS:</b>	Store at -20°C. After reconstitution, aliquot and store at -20°C to -80°C. Avoid repeated freezing and thawing cycles.	

**RECONSTITUTION:**

Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

**DESCRIPTION:**

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 pelvic 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 25.7 kDa protein consisting of 237 amino acid residues including the IGF-BP domain and thyroglobulin type-I domain.

**BIOLOGICAL ACTIVITY:**

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

**AMINO ACID SEQUENCE:**

DEAIHCPPCS EEKLARCRPP VGCEELVREP GCGCCATCAL GLGMPCGVYT  
PRCGSGLRCY PPRGVEKPLH TLMHGQGVCM ELAEIEAIQE SLQPSDKDEG  
DHPNNSFSPC SAHRRRCLQK HFAKIRDST SGGKMKVNGA PREDARVPVQ  
GSCQSELHRA LERLAASQSR THEDLYIPI PNCDRNGNFH PKQCHPALDG  
QRGKWCVDR KTGVKLPGGL EPKGELDCHQ LADSFRE

**RELATED PRODUCTS:**

- IGF-BP2, human recombinant (Cat # 7165-10, -50)
- IGF-BP7, human recombinant (Cat # 7167-10, -50)
- IGF-BP1, human recombinant (Cat # 4717-10, -25, -100, -1000)
- IGF-BP3, human recombinant (Cat # 4720-25, -100, -1000)
- IGF-BP5, human recombinant (Cat # 4723-25, -100, -1000)
- IGF-BP1 Antibody (Cat # 5717-100)
- IGF-BP3 Antibody (Cat # 5720-100)
- IGF-BP5 Antibody (Cat # 5723-100)

**FOR RESEARCH USE ONLY! Not to be used in humans.**