

Recombinant Human Insulin-like Growth Factor-Binding Protein 4, Insect Cells Derived (Human IGF-BP4)

Product Information

Product Name	Cat#	Size
Recombinant Human Insulin-like Growth Factor-Binding Protein 4, Insect Cells Derived (Human IGF-BP4)	92203ES08	5µg
	92203ES60	100µg
	92203ES76	500µg

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

Product Properties

Synonyms	Insulin-like Growth Factor-Binding Protein 4, IBP-4, HT29-IGF-BP, colon cancer cell growth inhibitor
Accession	P22692
GeneID	3487
Source	Insect Cell-derived Human IGF-BP4 protein, Asp22-Glu258.
Molecular Weight	Approximately 30 kDa.
AA Sequence	DEAIHCPPCS EEKLARCRPP VGCEELVREP GCGCCATCAL GLGMPCGVYT PRCGSGLRGY PPRGVEKPLH TLMHGQGVCM ELAEIEAIQE SLQPSDKDEG DHPNNSFSPC SAHDRRCLQK HFAKIRDRST SGGKMKVNGA PREDARVPVQ GSCQSELHRA LERLAASQSR THEDLYIPI PNCDRNGNFH PKQCHPALDG QRGKCWCVDR KTGVKLPGGL EPKGELDCHQ LADSFRE
Tag	None
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	> 97 % by SDS-PAGE and HPLC analyses. Fully biologically active when compared to standard. The ED ₅₀ as determined by its ability to inhibit
Biological Activity	IGF-II induced proliferation of MCF-7 cells is less than 0.1 µg/mL, corresponding to a specific activity of > 1.0 × 10 ⁴ IU/mg in the presence of 14 ng/ml of rHuIGF-II.
Endotoxin	< 0.1 EU per 1µg of the protein by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 20mM Tris-HCl, pH 8.0, 150mM NaCl.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom.
Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C.
Further dilutions should be made in appropriate buffered solutions.

Shipping and Storage

The products are shipped with ice pack and can be stored at -20°C to -80°C for 1 year.
Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

Cautions

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only.