



Recombinant Human FGF-BP-1

20180823DS



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	100-442S
Size:	5 µg
Lot. No.:	According to product label

Sequence

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MKKKVKINGLH SKVVSEQKDT LGNTQIKQKS RFGNKGKQFVT
KDQANCRWAA TEQEEGISLK VECTQLDHEF SCVFAGNPTS
CLKLKDERVY WKQVARNLRS QKDICRYSKT AVKTRVCRKD
FPESLKLVS STLFGNTKPR KEKTEMSPRE HIKGKETTPS
SLAVTQTMAT KAPECVEDPD MANQRKTALE FCGETWSSLC
TFFLSIVQDT SC
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Database References

Protein RefSeq:	NP_005121.1
Uniprot ID:	Q14512.1
mRNA RefSeq:	NM_005130.4

Scientific Background

Gene-ID (NCBI):	9982
Synonyms:	Fibroblast growth factor binding protein 1; FGF-BP; FGF-binding protein 1; HBp17

The Fibroblast Growth Factor (FGF) Superfamily is comprised of multifunctional proteins that serves to regulate several complex biological processes related to the development, restoration, and/or redistribution of prenatal and postnatal tissue, as well as angiogenesis, wound healing, nerve regeneration, chronic inflammation, and cancer growth. Members of the FGF Superfamily function through paracrine, autocrine and intracrine pathways to promote spatial and temporal integrations of several cell responses, such as proliferation, growth, differentiation, and migration. Fibroblast growth factor binding protein 1 (FGF-BP-1) is a secreted glycoprotein, which contains both a heparin-binding domain and a distinct FGF-binding region, that is shed into circulation where it acts as a chaperone molecule for FGFs, most notably FGF-acidic and FGF-basic. Once secreted, FGF-BP-1 can bind FGFs in a reversible manner to mobilize them from inactive storage on heparan sulfate proteoglycans in the extracellular matrix, and deliver them to high affinity receptors on the cell surface where they can exert biological function, all the while protecting against proteolytic degradation. Expressed within the squamous epithelium, FGF-BP-1 functions synergistically with FGFs as a mitogen for keratinocytes and an antagonist for angiogenesis under normal physiological conditions and instances of tissue repair, while also acting as an angiogenic switch for the malignant progression of epithelial cells. First discovered at elevated levels within A431 human epidermoid carcinoma cells, FGF-BP-1 is also expressed at elevated levels in many squamous cell carcinomas and tumors where it has been shown to be a rate-determining factor, interacting with the heparan sulfate proteoglycan perlecan to potentiate neovascularization of tumor masses. Recombinant Human FGF-BP-1 expressed in E.coli is a 24.0 kDa protein containing 212 amino acid residues.

Product Specifications

Expressed in	E. coli
Purity	≥ 95% by SDS-PAGE gel and HPLC analyses
Formulation	lyophilized
Length (aa):	212
MW:	24.0 kDa



AVOID REPEATED FREEZE AND THAW CYCLES!

Biological Activity: Determined by the dose-dependent stimulation of thymidine uptake by BaF3 cells expressing FGF receptors. The expected ED50 for this effect is 1.5-3.0 µg/ml.