

Recombinant Human IGFBP3 / IBP3 Protein (His tag)

Cat.NO.: TP04802

3th Edition

Synonyms:BP-53;IBP3;IGFBP3

Description:The Insulin-like Growth Factor (IGF) signaling system plays a central role in cellular growth, differentiation and proliferation. IGFBP3 is the most abundant IGF binding protein in human serum and has been shown to be a growth inhibitory, apoptosis-inducing molecule, capable of acting via IGF-dependent and IGF-independent mechanisms. It appears to function both by cell cycle blockade and the induction of apoptosis. IGFBP3 can be transported to the nucleus by an importin beta mediated mechanism, where it has been shown to interact with the retinoid X receptor alpha and possibly other nuclear elements. IGFBP3 antiproliferative signalling appears to require an active transforming growth factor beta (TGF-beta) signalling pathway, and IGFBP3 stimulates phosphorylation of the TGF-beta signalling intermediates Smad2 and Smad3. IGFBP3 has IGF-independent roles in inhibiting cell proliferation in cancer cell lines. Nuclear transcription factor, retinoid X receptor (RXR)-alpha, and IGFBP3 functionally interact to reduce prostate tumor growth and prostate-specific antigen in vivo. Several clinical studies have proposed that individuals with IGFBP3 levels in the upper range of normal may have a decreased risk for certain common cancers. This includes evidence of a protective effect against breast cancer, prostate cancer, colorectal cancer, and lung cancer. Moreover, IGFBP3 inhibits insulin-stimulated glucose uptake into adipocytes independent of IGF.

Form:PBS

Molecular Weight:31 kDa

Sequences:Gly28-Lys 291

Purity:> 95% by HPLC

Concentration:

Endotoxin Level:<1.0 EU per 1 ug of protein (determined by LAL method)

Storage:Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.