

Product Specification Sheet

Insulin Binding Protein 3 (IGFBP3) Antibodies

Cat. IGFBP31-S	Rabbit Anti-Human IGFBP-3 antiserum #1	SIZE: 100 ul
Cat. IGFBP31-C	Recombinant Human IGFBP-3 protein control for WB	SIZE: 100 ul

The insulin like growth factors (IGFs) are the major growth-promoting factors in the plasma. IGFs are secreted by a variety of cells and exert a multitude of effects on cellular survival, growth and differentiation. The A and B domains of IGFs are identical to insulin. IGF initiates their biological action through binding to the type IGF receptor (IGF-1R), a heterotrimeric protein complex with a tyrosine kinase activity. The IGF-IIR lacks the kinase activity and is actually identical to the mannose-6-phosphate receptor. Unlike most other peptide hormones, IGFs are complexed with specific binding proteins in the plasma known **IGF Binding proteins (IGFBPs)**. At least 6 related IGFBPs (**IGFBP1-6**) have been well characterized. Recently, **IGFBP-7/Mac25/prostacyclin-stimulating factor (PSF)/tumor adhesion factor (TAF)** was originally identified as a cDNA derived from leptomeninges. These proteins are present in plasma in high concentration as compared to the membrane IGFs. Therefore, IGFBPs have the potential to modulate the IGF action. IGFBPs have been shown to either inhibit or stimulate the IGF effects. The primary structures of mammalian IGFBPs appear to contain three distinct domains of roughly equivalent sizes: the conserved N-terminal domain, the highly variable mid region, and the conserved C-terminal domain. Human IGFBPs share approximately 36% identity. Recently several groups of cysteine-rich proteins with discrete, but striking, structural and functional similarities to the IGFBPs. This has led to the proposal of an IGFBP superfamily, comprised of the IGFBPs and these **IGFBP-related proteins (IGFBP-rp1-9)**.

FUNCTION: IGF-binding proteins prolong the half-life of the IGFs and have been shown to either inhibit or stimulate the growth promoting effects of the IGFs on cell culture. They alter the interaction of IGFs with their cell surface receptors.

SUBUNIT: Interacts with XLKD1 (By similarity). Binds IGF2 more than IGF1. Forms a ternary complex of about 140 to 150 kDa with IGF1 or IGF2 and a 85 kDa glycoprotein (ALS). Interacts with HN.

SUBCELLULAR LOCATION: Secreted.

TISSUE SPECIFICITY: Expressed by most tissues.

Protein name Insulin-like growth factor-binding protein 3

Synonyms IGFBP-3; IBP-3, IGF-binding protein 3, IBP3

Gene name : IGFBP3

Source of Antigen and Antibodies

Antigen	Human IGFBP3 expressed and purified from CHO cells (>98%) was used as immunogen
Ab Host/type	Rabbit, Polyclonal antiserum # IGFBP31-S
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control IgG	Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

For WB positive control (#**IGFBP31-C**), Human IGFBP-3 (264-aa, mol wt ~29 kDa) was expressed in E. coli and purified

(>95%). For Western blot +ve control (**Cat # IGFBP31-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **IGFBP31-C** for good visibility with antibody Cat # **IGFBP31-S**. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **IGFBP31-C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)

100ul solution lyophilized powder

Supplied in Buffer: 0.05% azide

Reconstitute powder in 100 ul PBS

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-2K using Chemiluminescence technique). Concentrated T98G cell serum free culture medium or recombinant protein can be used as positive control.

ELISA (1:10K; using 50-100 ng control peptide/well).

Immunoprecipitation: use 5-10 ul antiserum per 500 ul of conc. serum free medium.

Specificity & Cross-reactivity

IGFBP31-S antibody recognizes IGFBP-3 from human. It has minimal reactivity with IGFBP-3 from cow, pig, horse, or rat IGFBP-3. There is insignificant (<0.1%) crossreactivity with human IGFBP-1, -2, -4, and -5.

General References: (1) Cabbage ML et al (1990) JBC 265, 12642-12649; Wood WI et al (1988) Mol. Endocrinol. 2, 1176-1185; Thwatt R et al (1993) DNA seq. 4, 43-46; Zapf J et al (1990) JBC 14892-14898; Hwa V et al (1999) Endocrine Rev. 20, 761-787

*This product is for in vitro research use only.

Related Items available from ADI

IGFBP-1-7 antibodies, recombinant proteins, and IGFBP-1 ELISA kit

IGFBP31-S-C 80314A

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