# Human IGFBP-2 Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: AF674

## DESCRIPTION

| | |
|---|---|
| **Species Reactivity** | Human |
| **Specificity** | Detects human IGFBP-2 in direct ELISAs and Western blots. |
| **Source** | Polyclonal Goat IgG |
| **Purification** | Antigen Affinity-purified |
| **Immunogen** | Mouse myeloma cell line NS0-derived recombinant human IGFBP-2<br>Glu40-Gln328<br>Accession # CAA34373 |
| **Endotoxin Level** | <0.10 EU per 1 µg of the antibody by the LAL method. |
| **Formulation** | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS. |

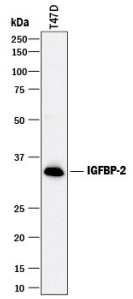
## APPLICATIONS

**Please Note:** *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

| | Recommended Concentration | Sample |
|---|---|---|
| **Western Blot** | 0.5 µg/mL | See Below |
| **Simple Western** | 25 µg/mL | See Below |
| **Neutralization** | Measured by its ability to neutralize IGFBP-2 inhibition of IGF-II-dependent proliferation in the MCF-7 human breast cancer cell line. The Neutralization Dose ($ND_{50}$) is typically 2.5-7.5 µg/mL in the presence of 0.2 µg/mL Recombinant Human IGFBP-2 and 14 ng/mL Recombinant Human IGF-II. | |

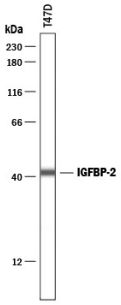
## DATA

### Western Blot



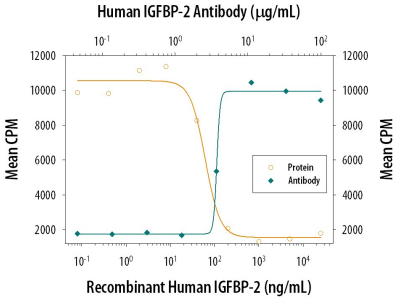

**Detection of Human IGFBP-2 by Western Blot.** Western blot shows lysates of T47D human breast cancer cell line. PVDF membrane was probed with 0.5 µg/mL of Goat Anti-Human IGFBP-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF674) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for IGFBP-2 at approximately 35 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

### Simple Western




**Detection of Human IGFBP-2 by Simple Western™.** Simple Western lane view shows lysates of T47D human breast cancer cell line, loaded at 0.2 mg/mL. A specific band was detected for IGFBP-2 at approximately 42 kDa (as indicated) using 25 µg/mL of Goat Anti-Human IGFBP-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF674) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

### Neutralization




**IGFBP-2 Inhibition of IGF-II-dependent Cell Proliferation and Neutralization by Human IGFBP-2 Antibody.** Recombinant Human IGFBP-2 (Catalog # 674-B2) inhibits Recombinant Human IGF-II (Catalog # 292-G2) induced proliferation in the MCF-7 human breast cancer cell line in a dose-dependent manner (orange line). Inhibition of Recombinant Human IGF-II (14 ng/mL) activity elicited by Recombinant Human IGFBP-2 (0.2 µg/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human IGFBP-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF674). The $ND_{50}$ is typically 2.5-7.5 µg/mL.



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# Human IGFBP-2 Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: AF674

## PREPARATION AND STORAGE

| | |
|---|---|
| **Reconstitution** | Reconstitute at 0.2 mg/mL in sterile PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

## BACKGROUND

The superfamily of insulin-like growth factor (IGF) binding proteins include the six high-affinity IGF binding proteins (IGFBP) and at least four additional low-affinity binding proteins referred to as IGFBP related proteins (IGFBP-rP). All IGFBP superfamily members are cysteine-rich proteins with conserved cysteine residues, which are clustered in the amino- and carboxy-terminal thirds of the molecule. IGFBPs modulate the biological activities of IGF proteins. Some IGFBPs may also have intrinsic bioactivity that is independent of their ability to bind IGF proteins. Post-translational modifications of IGFBPs, including glycosylation, phosphorylation and proteolysis, have been shown to modify the affinities of the binding proteins to IGF.

Human IGFBP-2 cDNA encodes a 328 amino acid (aa) residue precursor protein with a putative 39 aa residue signal peptide that is processed to generate the 289 aa residue mature protein. IGFBP-2 contains an integrin receptor recognition sequence (RGD sequence) but lacks potential N-linked glycosylation sites. During development, IGFBP-2 is expressed in a number of tissues. The highest expression level is found in the central nervous system. In adults, high expression levels are also detected in the central nervous system and in a number of reproductive tissues. IGFBP-2 binds preferentially to IGF-II, exhibiting a 2-10 fold higher affinity for IGF-II than for IGF-I.

**References:**


1. Jones, J.I. and D.R. Clemmons (1995) Endocrine Rev. **16**:3.
2. Kelley, K.M. *et al.* (1996) Int. J. Biochem. Cell Biol. **28**:619.




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