

## DESCRIPTION

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse IGFBP-5 in direct ELISAs and Western blots. In direct ELISAs, 25-50% cross-reactivity with recombinant human IGFBP-5 is observed and no cross-reactivity with recombinant mouse IGFBP-1 is observed.
<b>Source</b>	Monoclonal Rat IgG <sub>2A</sub> Clone # 127535
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse IGFBP-5 Leu20-Glu271 (predicted) Accession # Q07079
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied 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
<b>Western Blot</b>	1 µg/mL	Recombinant Mouse IGFBP-5 (Catalog # 578-B5)

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## 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. Mouse IGFBP-5 cDNA encodes a 271 amino acid (aa) precursor protein with a putative 19 aa signal peptide that is processed to generate the 252 aa mature protein. Mouse, human and rat IGFBP-5 share 97% identity. IGFBP-5 is expressed by fibroblasts, myoblasts and osteoblasts, making it the predominant IGFBP found in bone extracts. IGFBP-5 has a strong affinity for hydroxyapatite, allowing it to bind to bone cells. When bound to extracellular matrix, IGFBP-5 is protected from proteolysis and potentiates IGF activity, but when it is soluble, IGFBP-5 is cleaved to a biologically inactive 21 kDa fragment.

### References:

1. James, P.L. *et al.* (1993) *J. Biol. Chem.* **268**:22305.
2. Jones, J.I. and D.R. Clemmons (1995) *Endocrine Rev.* **16**:3.
3. Kelley, K.M. *et al.* (1996) *Int. J. Biochem. Cell Biol.* **28**:619.