Recombinant Mouse IGFBP-L1

Catalog Number: 4130-BL

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived Leu18-Leu270, with a C-terminal 10-His tag Accession # Q80W15
N-terminal Sequence Analysis	Leu18
Predicted Molecular Mass	28.2 kDa

SPECIFICATIONS

SDS-PAGE	36 kDa, reducing conditions
Activity	Measured by its ability to inhibit proliferation of HeLa human cervical epithelial carcinoma cells. Cai, Z. *et al.* (2005) BBRC **331**:261. The ED_{50} for this effect is 2-8 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Insulin-like Growth Factor Binding Protein-Like 1, also known as IGFBP-rP4, is a 38 kDa secreted member of the IGFBP superfamily of proteins. 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 (1). IGFBP-L1 contains an N-terminal IGFBP motif, a Kazal-type serine protease inhibitor region, and a C-terminal Ig-like domain (2, 3). Mature mouse IGFBP-L1 shares 76% and 96% amino acid (aa) sequence identity with human and rat IGFBP-L1, respectively. It shares 38% - 41% aa sequence identity with mouse IGFBP-7 and IGFBP-rp10 and 20% - 24% aa sequence identity with mouse IGFBP-1, -2, -3, -4, -5, and -6. IGFBP-L1 is most highly expressed in testis and brain, while lower levels are more broadly expressed (3). IGFBP-L1 is expressed in regionally and temporally distinct patterns during forebrain development (4). IGFBP-L1 inhibits cell proliferation in vitro and is downregulated in many colon and lung tumors (3). Transcriptional downregulation by promoter methylation is predictive of breast cancer aggressiveness (5).

References:

1. Firth, S.M. and R.C. Baxter (2002) Endocr. Rev. **23**:824.
2. Accession # Q80W15.
3. Cai, Z. *et al.* (2005) Biochem. Biophys. Res. Commun. **331**:261.
4. Gonda, Y. *et al.* (2007) Gene Expr. Patterns **7**:431.
5. Smith, P. *et al.* (2007) Clin. Cancer Res. **13**:4061.

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