

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived human IGFBP-2 protein
Glu40-Gln328, with an N-terminal Met
Accession # CAA34373

N-terminal Sequence Analysis Met

Predicted Molecular Mass 31 kDa

SPECIFICATIONS

SDS-PAGE 36 kDa, reducing conditions

Activity Measured by its ability to inhibit the biological activity of IGF-I or IGF-II on MCF-7 human breast cancer cells. Karey, K.P. *et al.* (1988) Cancer Research **48**:4083.
The ED₅₀ for this effect is 7.50-90.0 ng/mL in the presence of 14 ng/mL rhIGF-II.

Endotoxin Level <1.0 EU per 1 µg of the protein by the LAL method.

Purity >95%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation Lyophilized from a 0.2 µm filtered solution in Acetonitrile and TFA. 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

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.