

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived
Lys24-Cys234 & Asn29-Cys234 both with a C-terminal 10-His tag
Accession # Q14512

N-terminal Sequence Analysis Lys24 & Asn29

Predicted Molecular Mass 25.2 kDa & 24.6 kDa

SPECIFICATIONS

SDS-PAGE 31-35 kDa, reducing conditions

Activity Measured by its binding ability in a functional ELISA.
1 µg/mL of rhFGF-BP was mixed with serially diluted rhFGF basic (Catalog # 233-FB). Following incubation, the FGF-BP-FGF basic complex was captured on a Gt x hFGFBP-coated plate. Bound FGF basic was measured using biotinylated Gt x hFGF basic. The concentration of rhFGF basic that produces 50% of the optimal binding was found to be approximately 5-20 ng/mL.

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 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

Fibroblast growth factor binding protein (FGF-BP), also known as HBp17, is a secreted glycoprotein that increases the bioavailability of FGFs (1). Mature FGF-BP is a 34 kDa, 211 amino acid (aa) O-glycosylated protein with five conserved intrachain disulfide bonds (2 - 4). FGF-BP contains a heparin-binding domain (aa 110 - 143) and a distinct FGF-binding region (aa 193 - 243) (5). Mature human FGF-BP shares 59% and 54% aa sequence identity with mouse and rat FGF-BP, respectively. FGF-BP is expressed throughout development and in adult squamous epithelium (2, 6). It is upregulated in injured skin, renal tubular epithelium, and spinal nerves as well as in carcinomas of the skin, colon, and pancreas (3, 7 - 10). FGF-BP binds FGF-1, -2, -7, -10, and -22 which are secreted and sequestered in the extracellular matrix (ECM) (7, 11). The association of FGF-BP with heparan sulfate proteoglycans (HSPG) weakens HSPG attachment of FGFs and promotes their release (2, 8, 12, 13). FGF-BP enhances the mitogenic effects of FGFs, thereby contributing to epithelial, endothelial, and neuronal tissue repair, angiogenesis, and tumor growth (7 - 9, 11, 14, 15).

References:

1. Abuharbid, S. *et al.* (2006) *Int. J. Biochem. Cell Biol.* **38**:1463.
2. Wu, D. *et al.* (1991) *J. Biol. Chem.* **266**:16778.
3. Tassi, E. *et al.* (2006) *Cancer Res.* **66**:1191.
4. Lametsch, R. *et al.* (2000) *J. Biol. Chem.* **275**:19469.
5. Xie, B. *et al.* (2006) *J. Biol. Chem.* **281**:1137.
6. Aigner, A. *et al.* (2002) *Histochem. Cell Biol.* **117**:1.
7. Beer, H.-D. *et al.* (2005) *Oncogene* **24**:5269.
8. Ray, P.E. *et al.* (2006) *Am. J. Physiol. Regul. Integr. Comp. Physiol.* **290**:R105.
9. Tassi, E. *et al.* (2007) *Am. J. Physiol. Regul. Integr. Comp. Physiol.* **293**:R775.
10. Kurtz, A. *et al.* (2004) *Neoplasia* **6**:595.
11. Tassi, E. *et al.* (2001) *J. Biol. Chem.* **276**:40247.
12. Mongiat, M. *et al.* (2001) *J. Biol. Chem.* **276**:10263.
13. Kurtz, A. *et al.* (1997) *Oncogene* **14**:2671.
14. Aigner, A. *et al.* (2001) *Int. J. Cancer* **92**:510.
15. Czubayko, F. *et al.* (1997) *Nat. Med.* **3**:1137.