Recombinant Human Galectin-3BP/MAC-2BP

Catalog Number: 2226-GA

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived Val19-Asp585 & Tyr455-Asp585, both with a C-terminal 10-His tag Accession # Q08380
N-terminal Sequence Analysis	Val19 & Tyr455
Predicted Molecular Mass	64.6 kDa, 48.7 kDa & 16 kDa

SPECIFICATIONS

SDS-PAGE	90-95 kDa, 63-66 kDa and 26-27 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. Immobilized Recombinant Human (rh) Galectin3BP/MAC2BP at 0.1 µg/mL can bind rhGalectin-3 with an apparent K_D <20 nM.
Endotoxin Level	<1.0 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

Galectin-3 binding protein (Galectin-3BP), also known as MAC-2 binding protein (MAC-2BP or M2BP), and the 90 kDa tumor associated antigen (TAA90K or 90K), is a secreted glycoprotein of the scavenger receptor cysteine-rich (SRCR) superfamily (1, 2). Galectin-3BP binds Galectin-3 (formerly MAC-2) with high affinity, but also binds Galectins -1 and -7, several collagen types, fibronectin, β1 integrins and nidogen (3, 6, 7). It is widely expressed in all extracellular fluids and in pericellular areas of cell-rich tissues (1-3). The 585 amino acid (aa) human Galectin-3BP contains an 18 aa signal sequence and four definitive domains (4-6). Domain 1 is a group A scavenger receptor domain (4), domain 2 is a BTB/POZ domain that strongly mediates dimerization (5), and domain 3 is an IVR domain, that is also found following the POZ domain in *Drosophila* kelch protein. Although little is known about domain 4, recombinant domains 3 and 4 reproduce the solid-phase adhesion profile of full-length Galectin-3BP (5, 6). Glycosylation at seven N-linked sites, generates a molecular size of 85-97 kDa (1, 2, 6). Galectin-3BP dimers form linear and ring-shaped oligomers, most commonly decamers and dodecamers (3, 5). *In vitro*, Galectin-3BP has been shown to stimulate natural killer cells and lymphokine-activated killer cell activity (2). High Galectin-3BP expression has been correlated with tumor aggressiveness in several, but not all, study systems (7). Mature human Galectin-3BP shares 69% aa identity with mouse cyclophilin C-associated protein (CyCAP), which does not appear to bind Galectin-3 (8). Human Galectin-3BP also shares 73%, 67% and 68% aa identity with relatively uncharacterized orthologs in dog, rat and cow, respectively. A human N-terminally truncated sequence that begins within the BTB/POZ domain (aa 196) has been reported (9).

References:

1. Koths, K. *et al.* (1993) J. Biol. Chem. **268**:14245.
2. Ullrich, A. *et al.* (1994) J. Biol. Chem. **269**:18401.
3. Sasaki, T. *et al.* (1998) EMBO J. **17**:1606.
4. Hohenester, E. *et al.* (1999) Nat. Struct. Biol. **6**:228.
5. Muller, S. A. *et al.* (1999) J. Mol. Biol. **291**:801.
6. Hellstern, S. *et al.* (2002) J. Biol. Chem. **277**:15690.
7. Grassadonia, A. *et al.* (2004) Glycoconj. J. **19**:551.
8. Jalkanen, K. *et al.* (2001) Eur. J. Immunol. **31**:3075.
9. Entrez Accession # EAW89544.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956