

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived
Thr19-Val577, with a C-terminal 6-His tag
Accession # NP_035280

N-terminal Sequence Analysis Thr19

Predicted Molecular Mass 63.3 kDa

SPECIFICATIONS

SDS-PAGE 80-90 kDa, reducing conditions

Activity Measured by its binding ability in a functional ELISA.
When rmMAC-2BP is coated at 1 µg/mL (100 µL/well), Recombinant Human Galectin-3 (Catalog # 1154-GA) binds with an apparent $K_D < 5$ nM.

Endotoxin Level <0.10 EU per 1 µg of the protein by the LAL method.

Purity >90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Formulation Lyophilized from a 0.2 µm filtered solution in MOPS, NaCl and Imidazole with trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 300 µg/mL in 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), called CyCAP (cyclophilin C-associated protein) in the mouse, is a secreted glycoprotein of the scavenger receptor cysteine-rich (SRCR) superfamily (1, 2). Mouse Galectin-3BP is generally considered the paralog of human Galectin-3BP, which is also called MAC-2 binding protein (MAC-2BP), or 90 kDa tumor associated antigen (TAA90K or 90K) (1, 2). However, mouse Galectin-3BP binds cyclophilin C but not Galectin-3 (formerly MAC-2), while the opposite is true of human Galectin-3BP (3). The 577 amino acid (aa), 77 - 95 kDa mouse Galectin-3BP contains an 18 aa signal sequence and four definitive domains (1 - 6). Domain 1 is a group A scavenger receptor domain, domain 2 is a BTB/POZ domain that mediates dimerization, and domain 3 is an IVR domain that is also found following the POZ domain in *Drosophila* kelch protein (4, 5). Little is known about domain 4 (5, 6). Mature mouse Galectin-3BP shares 88%, 69%, 67% and 65% aa identity with rat, human, dog and cow Galectin-3BP, respectively. The Galectin-3BP dimer interface residues are generally conserved between mouse and human, so linear dimers that occur in humans are also likely in the mouse (5 - 7). Human Galectin-3BP also forms ring-shaped decamers and dodecamers. Mouse Galectin-3BP is widely expressed and modifies innate immune reactions. It is stimulated in macrophages by adhesion, TNF-α or IFN-γ (2). Mice deficient in Galectin-3BP secrete increased amounts of IL-12, TNF-α and IFN-γ and have lower survival in response to endotoxin (8). Galectin-3BP is induced in rat skin fibroblasts, keratinocytes, macrophages and lymphocytes during wound healing, and wounded Galectin-3BP-deficient mice are slow to heal (9). Rat Galectin-3BP is upregulated after cerebral ischemia (10). Ligands for human Galectin-3BP include some other galectins, collagens and integrins, but remain to be tested for mouse Galectin-3BP binding (5 - 7).

References:

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