Recombinant Mouse Galectin-3

Catalog Number: 1197-GA

DESCRIPTION

Source	*E. coli*-derived mouse Galectin-3 protein Ala2-Ile264 Accession # NP_034835
N-terminal Sequence Analysis	Ala2
Predicted Molecular Mass	27.3 kDa

SPECIFICATIONS

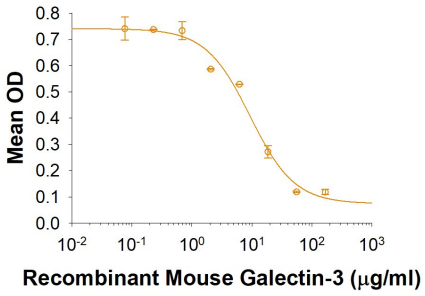
Activity	Measured by its ability to agglutinate human red blood cells. Hadari, Y.R. *et al.* (2000) J. Cell Sci. **113**:2385. The ED_{50} for this effect is 5-20 µg/mL.
Endotoxin Level	<1.0 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS, EDTA and DTT with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 250 µg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.
Shipping	The product is shipped with polar packs. 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. • 3 months, 2 to 8 °C under sterile conditions after reconstitution.

DATA

Bioactivity



Recombinant Mouse Galectin-3 (Catalog # 1197-GA) agglutinates human red blood cells. The ED_{50} for this effect is 5-20 µg/mL.

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BACKGROUND

Galectin-3, also known as Mac-2, L29, CBP35, and εBP, is classified as a chimeric member of the Galectin superfamily and contains one carbohydrate recognition domain (CRD) linked to a nonlectin domain (1, 2). Mature mouse Galectin-3 shares 80% and 86% amino acid (aa) sequence identity with human and rat Galectin-3, respectively. Galectin-3 is a 26 kDa protein that can be nuclear, cytoplasmic, or secreted (3, 4). Nuclear Galectin-3 can modulate gene expression, while cytosolic Galectin-3 can inhibit apoptosis and can participate in exocytosis, Caveolin-mediated endocytosis, and macrophage-mediated clearance of apoptotic cells (5-7). Extracellular Galectin-3 has been shown to form high-order oligomers that promote the cross-linking of cell surface oligosacchraides as well as integrin-dependent cell adhesion and apoptosis (8-11). Galectin-3 contributes to the innate immune response against *Candida albicans* and *Streptococcus pneumoniae*, and it can facilitate acute inflammatory responses via neutrophil activation and opsonization, macrophage recruitment, and mast cell activation (12-14). Galectin-3 can also contribute to chronic inflammation and fibrosis (15). It is implicated in neuroinflammatory disorders of the central nervous system, cardiac fibrosis, and heart failure, as well as tumor growth, progression, and metastasis (16-18).

References:

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