Recombinant Mouse Galectin-3

Catalog Number: 9039-GA

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived Ala10-Ile264 Accession # Q8C253
N-terminal Sequence Analysis	Ala10
Predicted Molecular Mass	26 kDa

SPECIFICATIONS

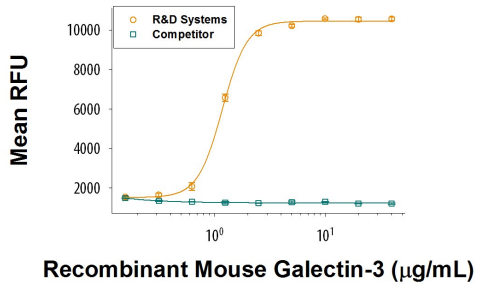
SDS-PAGE	25-35 kDa, reducing conditions
Activity	Measured by the ability of the immobilized protein to support the adhesion of D10.G4.1 mouse helper T cells. The ED_{50} for this effect is 1-5 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in HEPES, NaCl, TCEP, PEG-8000 and Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in PBS.
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. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

Bioactivity



Recombinant Mouse Galectin-3 (Catalog # 9039-GA) supports the adhesion of D10.G4.1 mouse helper T cells. The ED_{50} for this effect is 1-5 µg/mL, while competitor's protein does not have activity.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Recombinant Mouse Galectin-3

Catalog Number: 9039-GA

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 crosslinking 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:

1. Robertson, M.W. *et al.* (1990) Biochemistry **29**:8093.
2. Elola, M.T. *et al.* (2007) Cell. Mol. Life Sci. **64**:1679.
3. Haudek, K.C. *et al.* (2010) Biochim. Biophys. Acta **1800**:181.
4. Hughes, R.C. (1999) Biochim. Biophys. Acta **1473**:172.
5. Krzeslak, A. and A. Lipinska (2004) Cell. Mol. Biol. Lett. **9**:305.
6. Dumic, J. *et al.* (2006) Biochim. Biophys. Acta **1760**:616.
7. Sano, H. *et al.* (2003) J. Clin. Invest. **112**:389.
8. Ahmad, N. *et al.* (2004) J. Biol. Chem. **279**:10841.
9. Friedrichs, J. *et al.* (2008) J. Biol. Chem. **283**:32264.
10. Wen, Y. *et al.* (2006) J. Cell. Biochem. **98**:115.
11. Zhuo, Y. *et al.* (2008) J. Biol. Chem. **283**:22177.
12. Henderson, N.C. and T. Sethi (2009) Immunol. Rev. **230**:160.
13. Kohatsu, L. *et al.* (2006) J. Immunol. **177**:471814. Nieminen, J. *et al.* (2008) J. Immunol. **180**:2466.
14. Henderson, N.C. *et al.* (2008) Am. J. Pathol. **172**:288.
15. Newlaczyl, A.U. and L.G. Yu (2011) Cancer Lett. **313**:123.
16. Sherwi, N. *et al.* (2012) Future Cardiol. **8**:885.
17. Shin, T. (2013) Acta Histochem. **115**:407.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449