R&D SYSTEMS
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Mouse Galectin-7 Antibody

Monoclonal Rat IgG_{2A} Clone # 212923

Catalog Number: MAB1304

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Galectin-7 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant mouse Galectin-1, -3, -4, recombinant human (rh) Galectin-2, -7, or -8 is observed. In Western blots, approximately 20% cross-reactivity with rhGalectin-3, approximately 10% cross-reactivity with rhGalectin-7, and no cross-reactivity with rhGalectin-1 is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 212923
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant mouse Galectin−7 Ser2-Phe136 Accession # AAK29385
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

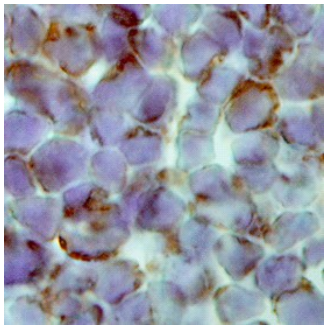
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Mouse Galectin−7 (Catalog # 1304-GA)
Immunohistochemistry	8-25 µg/mL	See Below
Mouse Galectin-7 Sandwich Immunoassay		**Reagent**
ELISA Capture	2-8 µg/mL	Mouse Galectin−7 Antibody (Catalog # MAB1304)
ELISA Detection	0.1-0.4 µg/mL	Mouse Galectin−7 Biotinylated Antibody (Catalog # BAF1304)
Standard		Recombinant Mouse Galectin−7 (Catalog # 1304-GA)

DATA

Immunohistochemistry



Galectin-7 in Mouse Thymus.
Galectin-7 was detected in perfusion fixed frozen sections of mouse thymus using Rat Anti-Mouse Galectin-7 Monoclonal Antibody (Catalog # MAB1304) at 25 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Rat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS017) and counterstained with hematoxylin (blue). Specific labeling was localized to the cytoplasm of lymphocytes. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
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. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

The galectins constitute a large family of carbohydrate-binding proteins with specificity for N-acetyl-lactosamine-containing glycoproteins. At least 14 mammalian galectins, which share structural similarities in their carbohydrate recognition domains (CRD), have been identified. The galectins have been classified into the prototype galectins (-1, -2, -5, -7, -10, -11, -13, -14), which contain one CRD and exist either as a monomer or a noncovalent homodimer; the chimera galectins (Galectin-3) containing one CRD linked to a nonlectin domain; and the tandem-repeat galectins (-4, -6, -8, -9, -12) consisting of two CRDs joined by a linker peptide. Galectins lack a classical signal peptide and can be localized to the cytosolic compartments where they have intracellular functions. However, via one or more as yet unidentified non-classical secretory pathways, galectins can also be secreted to function extracellularly. Individual members of the galectin family have different tissue distribution profiles and exhibit subtle differences in their carbohydrate-binding specificities. Each family member may preferentially bind to a unique subset of cell-surface glycoproteins (1-4).

Mouse Galectin-7 is a prototype monomeric galectin. It is expressed in stratified epithelia and is significantly down-regulated in squamous cell carcinomas. Galectin-7 is a pro-apoptotic protein that is highly induced by the tumor suppressor protein p53. It functions intracellularly upstream of JNK activation to enhance cytochrome c release during apoptosis (5). Galectin-7 may also be involved in cell-cell and cell-matrix interactions and exogenous galectin has been found to accelerate the re-epithelialization of wounds (6).

References:

1. Rabinovich, A. *et al*. (2002) TRENDS in Immunol. **23**:313.
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5. Kuwabara, I. *et al*. (2002) J. Biol. Chem. **277**:3487.
6. Cao, Z. *et al*. (2002) J. Biol. Chem. **277**:42299.

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