Human Galectin-9 Antibody

Recombinant Monoclonal Rabbit IgG Clone # 2315B
Catalog Number: MAB9064

DESCRIPTION

Species Reactivity	Human
Specificity	Detects Human Galectin-9 in direct ELISA.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2315B
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human embryonic kidney cell, HEK293 derived human Galectin-9 Met1-Thr323 Accession # O00182
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

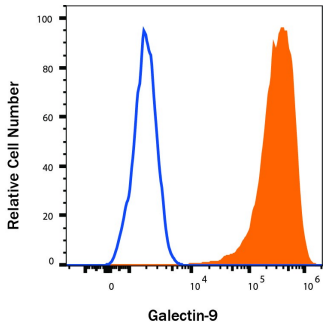
APPLICATIONS

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
Intracellular Staining by Flow Cytometry	0.25 µg/10^6 cells	HEK293 cell line transfected with Galectin-9 vs irrelevant HEK293 transfectant cells, fixed and permeabilized with Flow Cytometry Fixation Buffer (Catalog # FC004).

DATA

Intracellular Staining by Flow Cytometry



Detection of Galectin-9 in HEK293 cells by Flow Cytometry. HEK293 cell line transfected with Galectin-9 (filled histogram) vs irrelevant HEK293 transfectant cells (open histogram) were stained with Rabbit Anti-Human Galectin-9 Monoclonal Antibody (Catalog # MAB9064). To facilitate intracellular staining, cells were fixed and permeabilized with Flow Cytometry Fixation Buffer (Catalog # FC004). View our protocol for Staining Intracellular Molecules.

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.
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

Galectins comprise a family of multifunctional carbohydrate-binding proteins with specificity for N-acetyl-lactosamine-containing glycoproteins. At least 14 mammalian Galectins share structural similarities in their carbohydrate recognition domains (CRD), forming three groups: prototype (one CRD), tandem-repeat (two CRDs), and chimeric (one CRD, unique N-terminus) (1, 2). Full length Galectin-9 is a widely expressed 39 kDa tandem-repeat Galectin that contains two CRDs connected by a linker region (3). Progressive deletion within the linker region generates a 36 kDa isoform, also known as Ecalectin or UAT, as well as a 35 kDa isoform (4). This recombinant protein corresponds to the Ecalectin isoform of human Galectin-9 and shares 70% and 73% aa sequence identity with the corresponding regions of mouse and rat Galectin-9, respectively. Galectin-9 exhibits a wide range of activities. All three isoforms function as eosinophil chemoattractants (5, 6). This activity is destroyed by thrombin-mediated cleavage within the linker region of the long isoform, although the Ecalectin isoform is resistant to thrombin (7). Galectin-9 binds to carbohydrate moieties of IgE, thereby preventing immune complex formation, mast cell degranulation, and asthmatic and cutaneous anaphylaxis reactions (8). Independent of its lectin properties, Galectin-9 induces the maturation of dendritic cells which promote Th1 polarization (9). Galectin-9 induces cellular apoptosis in part by direct binding to TIM-3 (10, 11). Its interaction with TIM-3 inhibits Th1 cell and $CD8^+$ cytotoxic T cell responses and also promotes regulatory T cell differentiation and activity (11, 12). Galectin-9 suppresses tumor cell metastasis by interfering with the associations between hyaluronic acid and CD44 and between VCAM-1 and Integrin α4β1 (13). The Ecalectin isoform (UAT; urate transporter) can also be expressed as an integral membrane protein and mediate the cellular efflux of urate (14).

References:

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