

DESCRIPTION

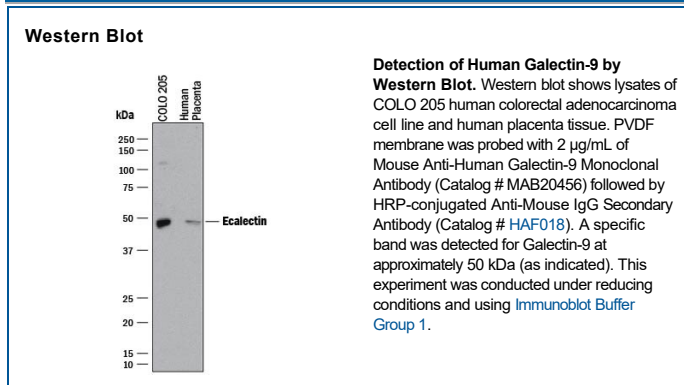
Species Reactivity	Human
Specificity	Detects human Galectin-9 in direct ELISAs.
Source	Monoclonal Mouse IgG _{2B} Clone # 1005451
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived human Galectin-9 Ala2-Thr323 Accession # O00182
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or 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	2 µg/mL	See Below

DATA



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. <ul style="list-style-type: none"> • 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.

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 $\alpha 4 \beta 1$ (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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