

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Galectin-4 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human Galectin-1, -2, -3, -7, -8, recombinant mouse Galectin-1, -3, -4, or -7 is observed.
Source	Monoclonal Mouse IgG _{2A} Clone # 198616
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Galectin-4 Ala2-Ile323 Accession # P56470
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Galectins are a family of 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 often termed prototype (one CRD), tandem-repeat (two CRDs) and chimeric (one CRD, unique N-terminus) (1, 2). All lack classical signal peptides, but are present and active both within and outside of the cell. Galectins are involved in cell adhesion, migration, survival and apoptosis, and are often up- or down-regulated in cancer (1-3). Galectin-4 is a 36 kDa tandem-repeat galectin found throughout the gastrointestinal tract, but also present in well-differentiated breast and liver carcinomas (3, 4). Each CRD binds a different set of carbohydrate groups, including those found on red cell blood group antigens (3, 5). CRD1 also binds cholesterol 3-sulfate and other sulfatides, which are concentrated within lipid raft membrane microdomains (6, 7). Endocytosed Galectin-4 is thought to play a role in forming the rafts, delivering them to the intestinal apical membrane, and stabilizing highly detergent-resistant "superrafts" (7, 9). Human Galectin-4 shares 76%, 77%, 78% and 80% aa identity with mouse, rat, bovine and porcine Galectin-4, respectively, with the highest identity occurring within the CRDs. A potential splice variant begins at aa 132 and lacks most of the first CRD (10). Galectin-4 expression is concentrated within microvilli in the gastrointestinal epithelium, where it can interact with CD3 and bind activated T cells in the lamina propria during intestinal inflammation (11, 12). Either pro- or anti-inflammatory activity has been shown, depending on the mouse model used. Galectin-4 can also bind lung, spleen and kidney macrophages, although its expression is normally low in these tissues (5).

PRODUCT SPECIFIC NOTICES

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