

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Galectin-7 in direct ELISAs and Western blots. In direct ELISAs, this antibody shows 100% cross-reactivity with recombinant mouse (rm) Galectin-7 and no cross-reactivity with rhGalectin-1, -2, -3, -4, -8, rmGalectin-1, -3, or -4.
Source	Monoclonal Mouse IgG _{2B} Clone # 198614
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Galectin-7 Ser2-Phe136 Accession # P47929
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 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

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). Human Galectin-7 is a prototype monomeric galectin. It is specifically expressed in stratified epithelia, notably in epidermis, but is barely detectable in epidermal tumors and significantly down regulated or absent from squamous carcinoma cell lines. The Galectin-7 gene is induced by tumor suppressor protein p53 transcriptional activity following genotoxic events. A pro-apoptotic protein, Galectin-7 functions intracellularly upstream of JNK activation and cytochrome-c release. This protein has been shown to increase the susceptibility of keratinocytes to UVB induced apoptosis, an essential process in the maintenance of epidermal homeostasis. Cell lines transfected with the Galectin-7 gene localized the protein in the nucleus and intracellularly. Human and mouse Galectin-7 share 79% amino acid homology (4-6).

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