Human Galectin-7
Alexa Fluor® 750-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 950723

Catalog Number: FAB13392S

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Galectin-7 in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG_1 Clone # 950723
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human Galectin-7 Ser2-Phe136 Accession # NP_002298
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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.*

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	A431 human epithelial carcinoma cell line fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005)

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 carconima 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 processss 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).

References:

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3. Hughes, R.C. (2002) Biochimie **83**:667.
4. R&D Systems Cytokine Bulletin; Summer 2002.
5. Bernerd, F. *et al.* (1999) Proc. Natl. Acad. Sci. USA **96**:11329.
6. Kuwabara, I. *et al.* (2002) J. Biol. Chem. **277**:3487.

PRODUCT SPECIFIC NOTICES

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