Human Galectin-7 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1339

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Galectin-7 in ELISAs and Western blots. In sandwich immunoassays, approximately 50% cross-reactivity with recombinant mouse (rm) Galectin-7 is observed and less than 0.5% cross-reactivity with recombinant human (rh) Galectin-1, rmGalectin-3, rhGalectin-4, and rhGalectin-8 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human Galectin-7 Ser2-Phe136 Accession # NP_002298
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

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	0.1 µg/mL	Recombinant Human Galectin-7 (Catalog # 1339-GA)
Immunohistochemistry	5-15 µg/mL	Immersion fixed paraffin-embedded sections of human skin
Human Galectin-7 Sandwich Immunoassay		**Reagent**
ELISA Capture	0.2-0.8 µg/mL	Human Galectin-7 Antibody (Catalog # AF1339)
ELISA Detection	0.1-0.4 µg/mL	Human Galectin-7 Biotinylated Antibody (Catalog # BAF1339)
Standard		Recombinant Human Galectin-7 (Catalog # 1339-GA)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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.

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:

1. Rabinovich, A. *et al.* (2002) TRENDS in Immunol. **23**:313.
2. Rabinovich, A. *et al.* (2002) J. Leukocyte Biology **71**:741.
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.