

**Galectin-3/LGALS3 Antibody**

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	28	Rabbit	#P17931	3958

**Product Usage Information****Application**

Western Blotting

**Dilution**

1:1000

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

Galectin-3/LGALS3 antibody recognizes endogenous levels of total galectin-3/LGALS3 protein.

**Source / Purification**

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human galectin-3/LGALS3 protein. Antibodies are purified by protein A and peptide affinity chromatography.

**Background**

Galectins are a family of  $\beta$ -galactose binding proteins that are characterized by an affinity for poly-N-acetyllactosamine-enriched glycoconjugates and a carbohydrate-binding site (1,2). Members of the galectin family have been implicated in a variety of biological functions, including cell adhesion (3), growth regulation (4), cytokine production (5), T cell apoptosis (6), and immune responses (7).

Galectin-3/LGALS3 is involved in several diverse biological functions. Galectin-3/LGALS3 binds IgE (8). Galectin-3/LGALS3 is an unusual protein in that it can be found both extracellularly and intracellularly. Intracellularly, Galectin-3/LGALS3 can localize to the cytoplasm, nucleus, or both, depending on cell type and experimental conditions. Nuclear Galectin-3/LGALS3 has been identified as a pre-mRNA splicing factor (9). Galectin-3/LGALS3 production has been shown to increase during inflammation and in obesity, and the protein itself can have an inflammatory effect under certain conditions (10). Galectin-3/LGALS3 forms a complex with  $\alpha 3$ ,  $\beta 1$  integrin to act as a surface receptor on endothelial cells for the NG2 proteoglycan, which triggers cell motility and angiogenesis (11). In addition to these functions, Galectin-3/LGALS3 is also a required factor for the terminal differentiation of epithelial cells (12).

**Background References**

1. Barondes, S.H. et al. (1994) *Cell* 76, 597-8.
2. Barondes, S.H. et al. (1994) *J Biol Chem* 269, 20807-10.
3. Offner, H. et al. (1990) *J Neuroimmunol* 28, 177-84.
4. Wells, V. and Mallucci, L. (1991) *Cell* 64, 91-7.
5. Filer, A. et al. (2009) *Arthritis Rheum* 60, 1604-14.
6. Perillo, N.L. et al. (1995) *Nature* 378, 736-9.
7. Cooper, D.N. et al. (1991) *J Cell Biol* 115, 1437-48.
8. Platzer, B. et al. (2011) *Immunol Lett* 141, 36-44.
9. Haudek, K.C. et al. (2010) *Biochim Biophys Acta* 1800, 181-9.
10. Pang, J. et al. (2013) *PLoS One* 8, e57915.
11. Fukushi, J. et al. (2004) *Mol Biol Cell* 15, 3580-90.
12. Hikita, C. et al. (2000) *J Cell Biol* 151, 1235-46.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting

**Cross-Reactivity Key**

**H:** Human **M:** Mouse **R:** Rat

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