Galectin-3 (Mac-2)

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Galectin-3 (Mac-2): is a β-galactoside-binding lectin belonging to the galectin family of proteins. It is expressed in a variety of tissues and cell types, including eosinophils, mast cells, dendritic cells, kidney cells, and sensory neurons, with the highest levels being found in activated macrophages and the epithelium of the gastrointestinal tract.

Galectin-3 is a promiscuous protein, having extracellular, cytoplasmic or nuclear localization, as well as a concentration-dependent ability to be monomeric or form oligomers. These properties impart great flexibility on galectin-3 as a specific regulator of a wide range of biological processes, including cell adhesion, cell activation and chemoattraction, cell growth and differentiation, cell cycle, and apoptosis.

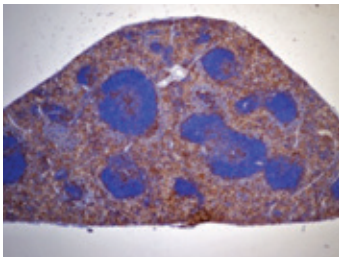
Galectin-3 is seen to play a role in many pathological states, including inflammation and fibrosis, heart disease, atherosclerosis, stroke and cancer. Its expression is upregulated in cases of liver fibrosis, renal fibrosis, and idiopathic pulmonary fibrosis (IPF). Additionally, several studies have shown that elevated levels of galectin-3 in the myocardium are associated with a higher risk of death in individuals with chronic heart failure. Galectin-3 is observed at elevated levels in various types of cancer, and is secreted by both tumor cells and the interacting vascular endothelial cells. It modulates a diverse set of functions, such as cell growth, adhesion, migration, invasion, angiogenesis, immune function, apoptosis and endocytosis; all of these processes are important for tumor progression and metastasis. Due to the role of galectin-3 in various pathologies, it is increasingly being investigated as a potential diagnostic marker and therapeutic target.

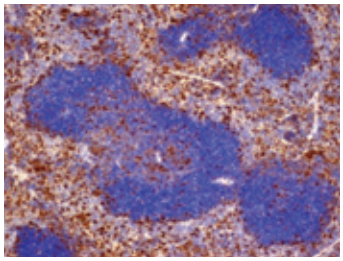
Specificity	Format	Clone	Isotype	Species Reactivity	Applications	Size	Cat #
Galectin-3 (Gal-3, Mac-2)	Purified	M3/38	Rat IgG2a	Human/Mouse	C, E, F, IF, P, WB	100 µg	**CL8942AP**
	Biotin	M3/38	Rat IgG2a	Human/Mouse	C, E, F, IF, P, WB	100 µg	**CL8942B**
	FITC	M3/38	Rat IgG2a	Human/Mouse	F, IF	100 µg	**CL8942F**
	10 nm Gold Nanoparticles, OD3	M3/38	Rat IgG2a	Human/Mouse	C, E, P, WB	0.5 mL	**CL8942G**
	10 nm Gold Nanoparticles, OD3	M3/38	Rat IgG2a	Human/Mouse	C, E, P, WB	1.0 mL	**CL8942G-2**
	Low Endotoxin	M3/38	Rat IgG2a	Human/Mouse	C, E, F, IF, P, WB	500 µg	**CL8942LE**

! Please inquire about additional formats/sizes.

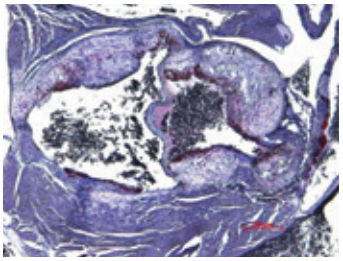
Legend for Applications:

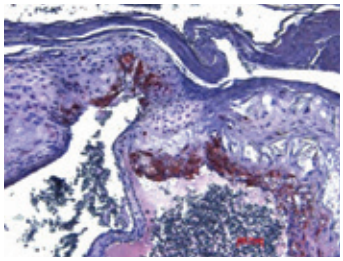
C =Cryostat Sections
E =ELISA
F =Flow Cytometry
IF =Immunofluorescence
P =Paraffin-Embedded Sections
WB =Western Blotting



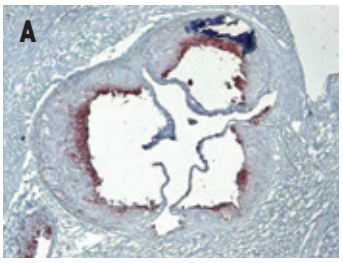


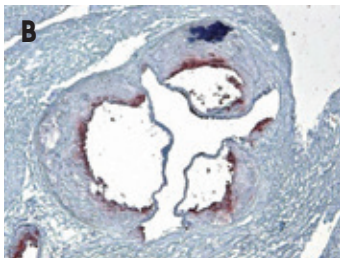
Purified Anti-Mac-2/Galectin-3 (CL8942AP) staining of FB10A mouse spleen at 4x (left) and 10x (right) magnification. (Anti-Mac-2/Galectin-3 was used at a dilution of 1:1500 or 1:2000 with an incubation of 1 hour at RT). Image provided by Nina Volokh, Baldwin Lab, Cleveland Clinic Foundation.

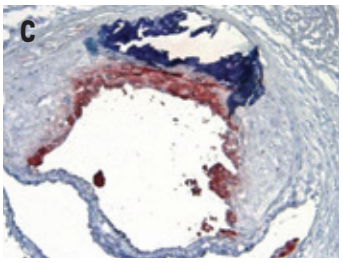


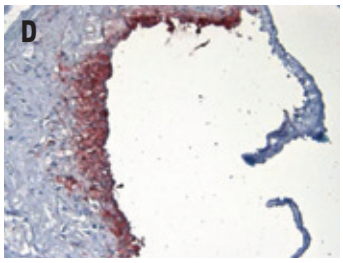


Purified Anti-Mac-2/Galectin-3 (CL8942AP) staining (0.5 µg/ml) of a mouse sinus atherosclerosis plaque (aortic roots in heart), paraffin-embedded tissue section; seen at 5x (left) and 10x (right) magnification. Image provided by Dr. Behrooz Sharifi's lab at Cedars-Sinai.

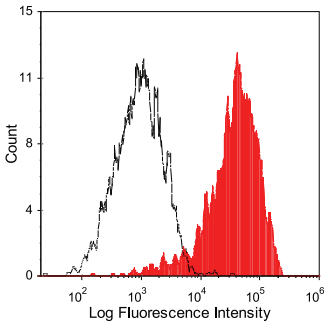








Purified Anti-Mac-2/Galectin-3 (CL8942AP) staining (0.5 µg/ml) of mouse sinus atherosclerosis plaques (aortic roots in heart), OCT (Frozen) tissue sections; seen at 5x (A, B) and 10x (C, D) magnification. Image provided by Dr. Behrooz Sharifi's lab at Cedars-Sinai.



Mouse/Human Mac-2 (Galectin-3) (CL8942)

Thioglycollate-elicited C57BL/6 mouse peritoneal macrophages stained with Anti-Galectin-3 (clone: M3/38) (filled histogram) or rat IgG2a isotype control (open histogram).

Selected References for Anti-Galectin-3 (M3/38):

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2. Schober A, et al. (2014) **MicroRNA-126-5p promotes endothelial proliferation and limits atherosclerosis by suppressing Dlk1.** Nat Med. 20(4): 368-376.
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4. Li X, Zhu M, et al. (2014) **Activation of CXCR7 limits atherosclerosis and improves hyperlipidemia by increasing cholesterol uptake in adipose tissue.** Circulation. 129(11):1244-53.
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7. Kluger MA, et al. (2014) **B-cell-derived IL-10 does not vitally contribute to the clinical course of glomerulonephritis.** Eur J Immunol. 44(3):683-93.
8. Metushi IG, Hayes MA, Uetrecht J. (2015) **Treatment of PD-1(-/-) mice with amodiaquine and anti-CTLA4 leads to liver injury similar to idiosyncratic liver injury in patients.** Hepatology. 61(4):1332-42.
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10. Awad AS, et al. (2015) **Macrophage-derived tumor necrosis factor-α mediates diabetic renal injury.** Kidney Int. 88(4):722-33.
11. Schmidt T, et al. (2015) **Function of the Th17/interleukin-17A immune response in murine lupus nephritis.** Arthritis Rheumatol. 67(2):475-87.

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