

#54330 Store at -20°C

Galectin-9 (D9R4A) XP® Rabbit mAb



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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:
WB, IHC-Bond, IHC-P, FC-FP	H	Endogenous	9-40	Rabbit IgG	#O00182	3965

Product Usage Information

Application	Dilution
Western Blotting	1:1000
IHC Leica Bond	1:800
Immunohistochemistry (Paraffin)	1:800
Flow Cytometry (Fixed/Permeabilized)	1:1600

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #71325.

Specificity / Sensitivity

Galectin-9 (D9R4A) XP® Rabbit mAb recognizes endogenous levels of total galectin-9 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant human galectin-9 protein.

Background

Galectins are a family of β -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-9 is induced by proinflammatory stimuli, including IFN- γ , TNF- α , and TLR ligands, and regulates various immune responses through interaction with its ligand TIM-3 (8, 9). Binding of galectin-9 to TIM-3 expressed by Th1 CD4 T cells resulted in T cell death (9). On the other hand, galectin-9 treatment of tumor-bearing mice increased the number of IFN- γ -producing TIM-3+ CD8 T cells and TIM-3+ dendritic cells (10). Transgenic overexpression of either TIM-3 or galectin-9 in mice led to an increase in cells with a myeloid-derived suppressor cell phenotype and inhibition of immune responses (11). CD44 is also proposed to be a receptor for galectin-9, and interaction of galectin-9 with CD44 expressed by induced regulatory T (iTreg) cells enhanced the stability of function of iTreg cells. In addition, galectin-9 was recently demonstrated to bind Dectin-1 expressed by pancreatic ductal adenocarcinoma-infiltrating macrophages, resulting in tolerogenic macrophage reprogramming and suppression of anti-tumor immunity. Increased galectin-9 expression has been observed in several cancer types, including lung, liver, breast, and kidney (12). Alternative splicing of the galectin-9 transcript leads to several isoforms (13).

Background References

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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. Gieseke, F. et al. (2013) *Eur J Immunol* 43, 2741-9.
9. Zhu, C. et al. (2005) *Nat Immunol* 6, 1245-52.
10. Nagahara, K. et al. (2008) *J Immunol* 181, 7660-9.
11. Dardalhon, V. et al. (2010) *J Immunol* 185, 1383-92.
12. Heusschen, R. et al. (2014) *Biochim Biophys Acta* 1842, 284-92.
13. Heusschen, R. et al. (2013) *Biol Reprod* 88, 22.

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

WB: Western Blotting **IHC-Bond:** IHC Leica Bond **IHC-P:** Immunohistochemistry (Paraffin)
FC-FP: Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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