Anti-Galectin 9 [RG9-35] Standard Size Ab01088-2.0

This chimeric mouse antibody was made using the variable domain sequences of the original Rat IgG2a format, for improved compatibility with existing reagents, assays and techniques.

Isotype and Format: Mouse IgG2a, Kappa
Clone Number: RG9-35
Alternative Name(s) of Target: ecalectin; Gal-9; galectin 9; Galectin-9; HUAT; lectin, galactose binding, soluble 5; LGALS9A; tumor antigen HOM-HD-21; urate transporter/channel protein.
UniProt Accession Number of Target Protein: O08573
Published Application(s): Blocking, functional assays, IP, FC
Published Species Reactivity: Mouse
Immunogen: This antibody was raised by immunising rats with recombinant mouse galectin-9.
Specificity: This antibody is specific for murine galectin-9, a 40 kDa S-type lectin that is expressed by various cell types, including lymphocytes, thymocytes, macrophages, dendritic cells, astrocytes, mast cells, eosinophils, fibroblasts, epithelial cells, and endothelial cells. Galectin-9 binds to β-galactosides and can serve as a ligand for TIM-3 (CD366). The protein is implicated in both innate and adaptive immune responses, specifically, induction of cytokine secretion by macrophages, bactericidal functions, promotion of dendritic cell maturation, regulatory T cell expansion, and negative regulation of Th1, Th17, NK, and cytotoxic T cells.
Application Notes: When this antibody was first generated and characterised, it was shown to bind with galectin-9 (Gal-9) but not with either galectin-1 or galectin-3. Furthermore, it was shown to be capable of blocking Tim-3-Fc binding to Gal-9, and inhibiting Gal-9-induced Th1 cell death *in vitro* (Fukushima et al., 2008; PMID: 18087160). This antibody has been used in FACS analyses. For instance, to describe a novel mechanism where Tim-3 binds HMGB-1 on virus-specific $CD8^+$ Treg cells, suppressing proliferation of $CD8^+$ T effector cells during acute adenoviral infection (Dolina et al., 2014; PMID: 24677194); and to indicate a crucial role for Tim-3 in phagocytosis of apoptotic cells and cross-presentation (Nakayama et al., 2009; PMID: 19224762). In addition, this antibody has been used *in vivo* to study the roles of Gal-9 in the development of experimental allergic conjunctivitis in mice (Fukushima et al., 2008; PMID: 18087160) and to demonstrate that constitutive expression of Gal-9 plays an immunosuppressive role in corneal allografts (Shimmura-Tomita et al., 2013; PMID: 23667648). This antibody was used in a cold immunoprecipitation (IP) assay to explore the binding of Gal-Nab1 and Gal-Nab2 to native murine gal-9, using a protein extract from murine thymus as the source of native Gal-9; RG9-35, was one of the antibodies used to isolate

immune complexes formed between primary antibodies and proteins extracted from a mouse thymus for further analysis (Lhuillier et al., 2018; PMID: 30204750).
Antibody First Published in: Fukushima et al. Roles of galectin-9 in the development of experimental allergic conjunctivitis in mice. Int Arch Allergy Immunol. 2008;146(1):36-43. PMID:18087160
Note on publication: Describe the original generation of this antibody and its subsequent use in in vitro and in vivo functional assays to study the roles of galectin-9 in the development of experimental allergic conjunctivitis in mice.

Product Form

Size: 200 µg Purified antibody.
Purification: Protein A affinity purified
Supplied In: PBS with 0.02% Proclin 300.
Storage Recommendation: Store at 4^{0}C for up to 3 months. For longer storage, aliquot and store at -20^{0}C.
Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.