

## Anti-Galectin 9 [RG9-35] VivopureX 100 mg Ab01088-2.3-VXB

This antibody was created using our proprietary Fc Silent™ engineered Fc domain containing key point mutations that abrogate binding to Fc gamma receptors.

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, Fc Silent™, 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  $\beta$ -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<sup>+</sup> Treg cells, suppressing proliferation of CD8<sup>+</sup> 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:** 100 mg VivopureX products are produced at high purity (>98%), low endotoxin (<0.5 EU/mg) and are formulated without preservatives. These antibodies are chimerized to have an Fc domain matching their target species to reduce immunogenicity and give you the optimal effector function for your experiment. As a result VivopureX products are the ideal choice for in vivo research applications.

**Purification:** Protein A affinity purified

**Supplied In:** PBS only.

**Storage Recommendation:** All VivopureX products are formulated in PBS only without addition of preservatives. To ensure optimal storage and prevent microbial contamination, only open and dispense under sterile conditions. Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

**Concentration:** ≥1mg (see vial label for exact conc)

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