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Anti-Galectin 9 Antibody

Catalog # AP51317

Product Information

Application	WB, IHC, IF/IC
Primary Accession	O00182
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	39518

Additional Information

Gene ID	3965
Other Names	Galectin-9; Gal-9; Ecalectin; Tumor antigen HOM-HD-21
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human Galectin 9. The exact sequence is proprietary.
Dilution	WB~~ 1:1000 IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	LGALS9
Function	Binds galactosides (PubMed: 18005988). Has high affinity for the Forssman pentasaccharide (PubMed:18005988). Ligand for HAVCR2/TIM3 (PubMed:16286920). Binding to HAVCR2 induces T-helper type 1 lymphocyte (Th1) death (PubMed:16286920). Also stimulates bactericidal activity in infected macrophages by causing macrophage activation and IL1B secretion which restricts intracellular bacterial growth (By similarity). Ligand for P4HB; the interaction retains P4HB at the cell surface of Th2 T-helper cells, increasing disulfide reductase activity at the plasma membrane, altering the plasma membrane redox state and enhancing cell migration (PubMed:21670307). Ligand for CD44; the interaction enhances binding of SMAD3 to the FOXP3 promoter, leading to up-regulation of FOXP3 expression and increased induced regulatory T (iTreg) cell stability and suppressive function (By similarity). Promotes ability of mesenchymal stromal cells to suppress T-cell proliferation (PubMed:23817958). Expands regulatory T-cells and induces cytotoxic T-cell apoptosis following virus infection (PubMed:20209097). Activates ERK1/2 phosphorylation inducing cytokine

(IL-6, IL-8, IL-12) and chemokine (CCL2) production in mast and dendritic cells (PubMed:16116184, PubMed:24465902). Inhibits degranulation and induces apoptosis of mast cells (PubMed:24465902). Induces maturation and migration of dendritic cells (PubMed:16116184, PubMed:25754930). Inhibits natural killer (NK) cell function (PubMed:23408620). Can transform NK cell phenotype from peripheral to decidual during pregnancy (PubMed:25578313). Astrocyte derived galectin-9 enhances microglial TNF production (By similarity). May play a role in thymocyte-epithelial interactions relevant to the biology of the thymus. May provide the molecular basis for urate flux across cell membranes, allowing urate that is formed during purine metabolism to efflux from cells and serving as an electrogenic transporter that plays an important role in renal and gastrointestinal urate excretion (By similarity). Highly selective to the anion urate (By similarity).

Cellular Location

Cytoplasm. Nucleus. Secreted. Note=May also be secreted by a non- classical secretory pathway (By similarity). Secreted by mesenchymal stromal cells upon IFNG stimulation (PubMed:23817958) {ECO:0000250|UniProtKB:O08573, ECO:0000269|PubMed:23817958} [Isoform 3]: Secreted

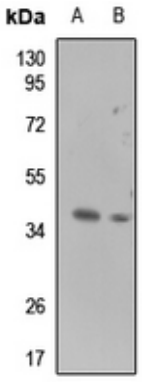
Tissue Location

Peripheral blood leukocytes and lymphatic tissues. Expressed in lung, liver, breast and kidney with higher levels in tumor endothelial cells than normal endothelium (at protein level) (PubMed:24333696). Expressed in trophoblast cells in decidua and placenta in pregnancy (at protein level) (PubMed:23242525, PubMed:25578313). Isoform 2 is the most abundant isoform expressed in endothelial cells (PubMed:24333696). Upon endothelial cell activation isoform 2 expression decreases while expression of isoform 3 and isoform 5 increases (PubMed:24333696). Isoform 4 decreases in pathological pregnancy (PubMed:23242525).

References

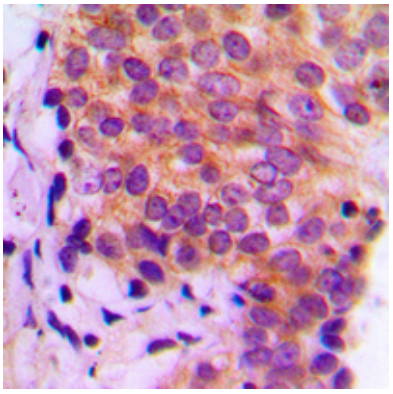
Tuereci O.,et al.J. Biol. Chem. 272:6416-6422(1997).
Kato S.,et al.Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
Matsumoto R.,et al.J. Biol. Chem. 273:16976-16984(1998).
Nakajima H.,et al.Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.
Akiyama S.,et al.Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases.

Images

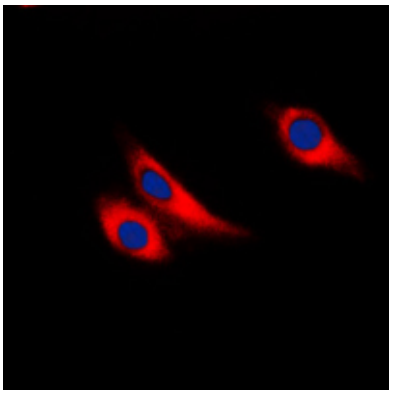


Western blot analysis of Galectin 9 expression in HEK293T (A), Hela (B) whole cell lysates. (Predicted band size: 39 kD; Observed band size: 36 kD)

Immunohistochemical analysis of Galectin 9 staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat



mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of Galectin 9 staining in THP1 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

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