Active Galectin 9 (GAL9)

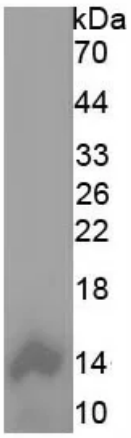
Catalog#:PER12335

概述（Summary）

别称（Alternative Names）	LGALS9; Ecalectin; Lectin,Galactoside-Binding Soluble 9; Tumor antigen HOM-HD-21
纯度（Purity）	Greater than 97% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Phe17-Gln147】
Accession #	P97840
表达宿主（Host）	E.coli
种属（Species）	Rattus norvegicus (Rat)
预测分子量（Predicted MW）	16.3 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in ddH_2O to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Binds galactosides. Has high affinity for the Forssman pentasaccharide. Ligand for HAVCR2/TIM3. Binding to HAVCR2 induces T-helper type 1 lymphocyte (Th1) death. Also stimulates bactericidal activity in infected macrophages by causing macrophage activation and IL1B secretion which restricts intracellular bacterial growth. 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. 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. Promotes ability of mesenchymal stromal cells to suppress T-cell proliferation. Expands regulatory T-cells and induces cytotoxic T-cell apoptosis following virus infection. Activates ERK1/2 phosphorylation inducing cytokine (IL-6, IL-8, IL-12) and chemokine (CCL2) production in mast and dendritic cells. Inhibits degranulation and induces apoptosis of mast cells. Induces maturation and migration of dendritic cells. Inhibits natural killer (NK) cell function. Can transform NK cell phenotype from peripheral to decidual during pregnancy. Astrocyte derived galectin-9 enhances microglial TNF production. 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. Highly selective to the anion urate.

电泳图（SDS-PAGE image）



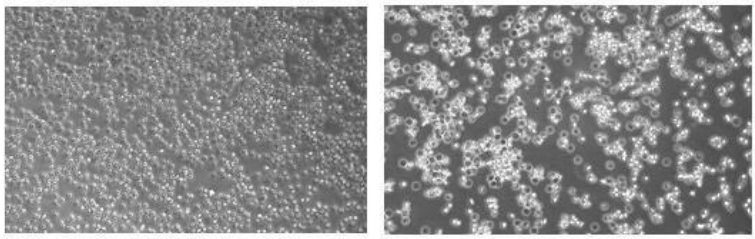
Greater than 97% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）



Galectin 9 (GAL9) is a member of the β-galactoside–binding galectin family. Galectin-9 is found outside of cells and may be

exported by non-classical pathways. Galectin 9 exhibits a variety of biological activities, the majority of which have focused on its immunomodulatory role toward lymphocytes, were it shows specific interactions with TIM-3, and can negatively regulate Th1 type immunity. It also can agglutinate red blood.In this case, we chose rabbit erythrocyte (RaE) to assay its ability of agglutination. A general procedure for hemagglutination assay (or haemagglutination assay; HA) is as follows, two-fold dilute the recombinant Rat GAL9 with 0.9% sodium chloride injection, add 50μL a serial dilution of GAL9 to each well of a U or V-bottom shaped 96-well microtiter plate. The final well serves as a negative control with no GAL9, replace with 50μL 0.9% sodium chloride injection. Then add 50μL 1% rabbit erythrocyte to each well and mixed gently. The plate is incubated for 3 hours at room temperature. The results are shown in Figure 1. It was obvious that the minimal effective concentration of GAL9 is 6.25 μg/mL. Figure 2. The hemagglutination assay of GAL9 in V- bottom shaped 96-well microtiter plate.



A B

Figure 1. The hemagglutination of recombinant rat GAL9
(A) Rabbit erythrocyte reacted with no GAL9 for 3h;
(B) Rabbit erythrocyte reacted with 50ug/ml GAL9 for 3h.

注意事项（Note）

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