

## Galectin-9/LGALS9 Protein, Human, Recombinant (GST &amp; His)

## General Information

Synonyms: Ecalectin;Galectin-9;Gal-9;Tumor antigen HOM-HD-21;LGALS9

Protein Construction: 1-323 aa

Species: Human

Expression Host: E. coli

Accession: O00182

Molecular Weight: 65.9 kDa (predicted)

MAFSGSQAPYLSPAVPFSGTIQGGGLQDGLQITVNGTVLSSSGTRFAVNFQTFSGNDIAHFHNPRFEDGGYVV  
CNTRQNGSWGPEERKTHMPFQKGMPPFDLCLFLVQSSDFKVMVNGILFVQYFHRVPPFHRVDTISVNGSVQLSYI  
SFQPPGVWPANPAPITQTVIHTVQSAPGQMFSTPAIPPMYPHPAYPMPFITLGGLYPSKSILLSGTVLPSA  
QRFHINLCSGNHIAFHLNPRFDENAVRNTQIDNSWGSEERSLPRKMPFVRGQSFVWILCEAHCLKVAVDG  
QHLFEYYHRLRNLPNTINRLEVGGDIQLTHVQT

AA Sequence:

## QC Testing

Biological Activity: Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.

Purity: > 90% as determined by SDS-PAGE.

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: Tris-based buffer, 50% glycerol

## Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

## Protein Background

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.; Acts as an eosinophil chemoattractant. It also inhibits angiogenesis. Suppresses IFNG production by natural killer cells.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

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