

# Recombinant Human Galectin-1/LGALS1 Protein

Catalog No.: RP00007 **Recombinant**

## Sequence Information

Species	Gene ID	Swiss Prot
Human	3956	P09382

### Tags

No tag

### Synonyms

GAL1; GBP;LGALS1; GAL1;  
galectin-1;GBP;Galectin 1/LGALS1

## Product Information

Source	Purification
<i>E. coli</i>	> 95% by SDS-PAGE.

Calculated MW	Observed MW
14.58 kDa	14 kDa

### Endotoxin

&lt; 0.1 EU/μg of the protein by LAL method.

### Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Contact us for customized product form or formulation.

### Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

## Contact

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## Background

Galectin-1, also known as LGALS1 (lectin, galactoside-binding, soluble 1), is a 135 amino acid (aa), 14 kDa, pleiotropic, Non-glycosylated, monomeric or homodimeric carbohydrate-binding protein of the prototype galectin family. Galectins lack a classical signal peptide and can be localized to the cytosolic compartments, or secreted by non-classical pathways. Secreted Galectin-1 has immunosuppressive and anti-inflammatory properties and suppresses acute and chronic inflammation and autoimmunity. It contributes to negative selection of developing T cells, immunosuppression by regulatory T cells, resolution of the inflammatory response, and inhibition of immune cell migration, inflammatory cytokine production, and mast cell degranulation. Galectin-1 contributes to different steps of tumour progression including cell adhesion, migration and tumour-immune escape, suggesting that blockade of galectin-1 might result in therapeutic benefits in cancer. Several potential glycoprotein ligands for galectin-1 have been identified, including lysosome-associated membrane glycoproteins and fibronectin, laminin, as well as T-cell glycoproteins CD43 and CD45. Evidence points to Gal-1 and its ligands as one of the master regulators of such immune responses as T-cell homeostasis and survival, T-cell immune disorders, inflammation and allergies as well as host-pathogen interactions.

## Basic Information

### Description

Recombinant Human Galectin-1/LGALS1 Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Ala2-Asp135) of human Galectin-1 (Accession #NP\_002296.1).

### Bio-Activity

Measured by its ability to agglutinate mouse red blood cells. The ED<sub>50</sub> for this effect is 0.5-3 μg/mL.

### Storage

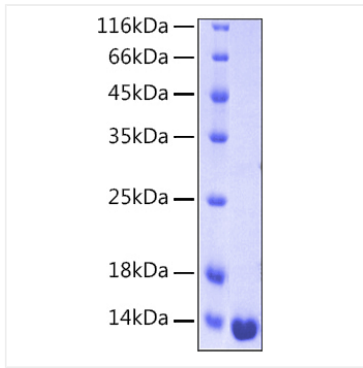
Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

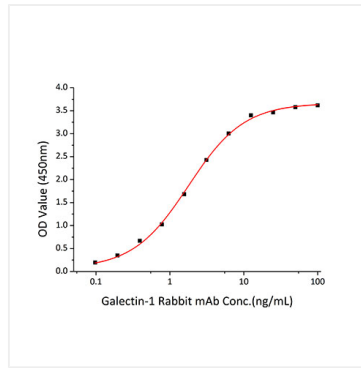
Avoid repeated freeze/thaw cycles.

## Validation Data

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Recombinant Human Galectin-1/LGALS1 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 14 kDa.



Immobilized recombinant Human Galectin-1 at 0.5 $\mu$ g/mL (100  $\mu$ L/well) can bind Galectin-1 Rabbit mAb with a linear range of 0.7-1.8 ng/mL.