

Recombinant Mouse Galectin-1/LGALS1 Protein

Catalog No.: RP01870 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Mouse	16852	P16045

Tags
NO-tag

Synonyms

Galectin-1; Gal-1; 14 kDa lectin; Beta-galactoside-binding lectin L-14-I; Galaptin; Lactose-binding lectin 1; Lectin galactoside-binding soluble 1; S-Lac lectin 1; Lgals1; Gbp

Product Information

Source	Purification
<i>E. coli</i>	

Calculated MW **Observed MW**

Endotoxin

< 1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, 1mM DTT, 1mM EDTA, pH7.4.

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.

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Background

Galectin-1 (Gal-1, GAL1), is a member of the galectins, a family of animal lectins ranging from *Caenorhabditis elegans* to humans, which is defined by their affinity for beta-galactosides and by significant sequence similarity in the carbohydrate-binding site. It is a homodimer with a subunit molecular mass of 14.5 kDa, which contains six cysteine residues per subunit. The cysteine residues should be in a free state to maintain a molecular structure that is capable of showing lectin activity. This endogenous lectin widely expressed at sites of inflammation and tumor growth has been postulated as an attractive immunosuppressive agent to restore immune cell tolerance and homeostasis in autoimmune and inflammatory settings. On the other hand, galectin-1 contributes to different steps of tumor progression including cell adhesion, migration, and tumor-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 Mouse Galectin-1/LGALS1 Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Ala2-Glu135) of Mouse Galectin-1/LGALS1 (Accession #NP_032521.1) fused with no tag.

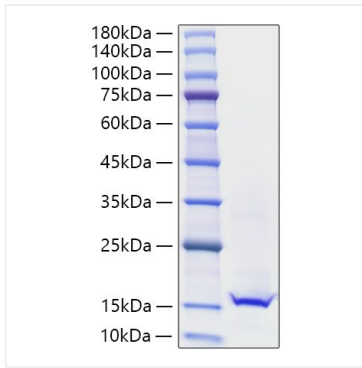
Bio-Activity

Measured by its ability to agglutinate mouse red blood cells. The ED₅₀ for this effect is 6.25-12.5 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



Recombinant Mouse Galectin-1/LGALS1
Protein was determined by SDS-PAGE with
Coomassie Blue, showing a band at 15-20
kDa.