

Human Galectin-1 / LGALS1 Protein

Catalog Number: 10290-HNAE



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

LGALS1, DKFZp686E23103, GAL1, GBP

Protein Construction:

A DNA sequence encoding the human Galectin 1 (NP_002296.1) (Met 1-Asp135) was expressed.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 98 % as determined by SDS-PAGE

Bio-Activity

Measured by its ability to agglutinate human red blood cells. The ED50 for this effect is typically 0.5-3 µg/ml.

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Ala 2

Molecular Mass:

The recombinant human Galectin 1 comprises 134 amino acids without the initiator methionine, and predicts a molecular mass of 15 kDa as estimated in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

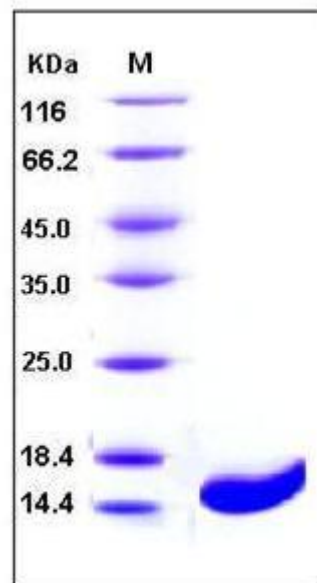
Usage Guide

Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution

products.

Protein Description

Galectin-1 (Gal-1, G₁), also known as the β -galactoside-binding animal lectin, is a member of a single carbohydrate-recognition domain. Galectin-1 is expressed in a variety of cell types, including thymic epithelial cells, endothelial cells, dendritic cells, macrophages, fibroblasts, and bone marrow stromal cells. There is increased galectin-1 expression in many types of cancer, including colon, breast, ovary and prostate carcinomas. 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. It is revealed that Galectin-1 can induce apoptosis of activated human T cells and human T leukaemia cell lines, while resting T cells also bound galectin-1, but did not undergo apoptosis. Galectin-1 modulates inflammatory responses and contributes to tumor progression and immune cell homeostasis. Galectin-1 regulates the inflammatory responses of neutrophils, mast cells, and macrophages and also associates with components of the complement system. Galectin-1 is thus suggested to act as an autocrine negative regulatory "cytokine", killing T cells to terminate an immune response.

References

1. Nozomu Nishi, et al., Glycobiology 2008 18 (12): 1065-1073.
2. Jiale He, Linda G. Baum, 2004, The Journal of Biological Chemistry, Vol. 279, No. 6: 4705-4712.
3. Santiago Di Lella, et al., 2009, Biochemistry, 48 (4), pp 786-791.
4. Nicola TINARI, et al. 2001, Int. J. Cancer: 91, 167-172.
5. Magali Fouillit, et al. 2000, Glycobiology, Vol. 10, No. 4: 413-419.

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Fax :+86-10-51029969 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>