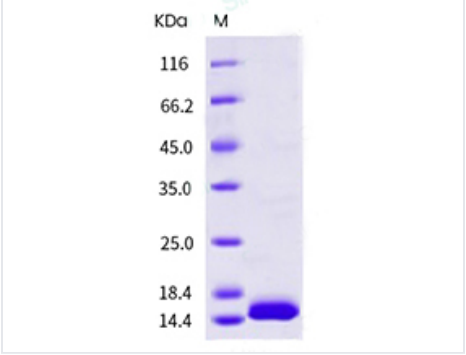
Galectin-1 (LGALS1) Active Protein

PRODUCT OVERVIEW

Product Name	Galectin-1 (LGALS1), Active Protein
Full Product Name	Galectin-1 Protein, Human, Recombinant
Product Gene Name	LGALS1 active protein
Product Synonym Names	Human Galectin-1/LGALS1 Protein; GAL1 Protein, Human; Galectin-1 Protein, Human; GBP Protein, Human; lectin, galactoside-binding, soluble, 1
Sequence	Met1-Asp13 5
Host	E Coli
Form/Format	Lyophilized from sterile PBS, pH7.4. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hard copy of CoA.
Purity/Purification	>98% as determined by SDS-PAGE
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice.
Molecular Weight	14,716 Da
Chromosome Location	Chromosome: 22; NC_000022.10 (38071613..38075809). Location: 22q13.1
OMIM	150570
3D Structure	ModBase 3D Structure for P09382
Active Protein Note	Protein activity can be an ambiguous term. Please refer to the data sheet or inquire with Technical Support to determine the definition of activity for this product.
Species	Human
Activity	Measured by its ability to agglutinate human red blood cells. The ED50 for this effect is typically 3-30ug/mL.
Predicted N Terminal	Ala 2
Tag	Native
Protein Construction	A DNA sequence encoding the human Galectin 1 (NP_002296.1)(Met 1-Asp135) was expressed.
Reconstitution	A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.

Related Product Information for LGALS1 active protein	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 14.5kDa, 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.
Product References and Citations for LGALS1 active protein	Gaudet AD, et al. (2005) Expression and functions of galectin-1 in sensory and motoneurons. Curr Drug Targets. 6(4): 419-25.Kadoya T, et al. (2006) Structural and functional studies of galectin-1: a novel axonal regeneration-promoting activity for oxidized galectin-1. Curr Drug Targets. 6(4): 375-83.Camby I, et al. (2006) Galectin-1: a small protein with major functions. Glycobiology. 16(11): 137R-157R.Salatino M, et al. (2008) Galectin-1 as a potential therapeutic target in autoimmune disorders and cancer. Expert Opin Biol Ther. 8(1): 45-57.
Other Notes	Small volumes of LGALS1 active protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for LGALS1 purchase	MBS8120167 is an active protein targeting LGALS1. Also known as Galectin-1 Protein, Human, Recombinant. Host: E Coli.



SDS-Page of LGALS1 active protein

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for LGALS1. It may not necessarily be applicable to this product.

NCBI GI #	4504981
NCBI GeneID	3956
NCBI Accession #	NP_002296.1
UniProt Primary Accession #	P09382
UniProt Secondary Accession #	Q9UDK5; B2R5E8
UniProt Related Accession #	P09382
GenBank Nucleotide #	NM_002305.3
NCBI Official Full Name	galectin-1
NCBI Official Synonym Full Names	lectin, galactoside-binding, soluble, 1
NCBI Official Symbol	LGALS1
NCBI Official Synonym Symbols	GBP; GAL1

UniProt Protein Name	Galectin-1
UniProt Synonym Protein Names	14 kDa laminin-binding protein; HLBP14; 14 kDa lectin; Beta-galactoside-binding lectin L-14-I; Galaptin; HBL; HPL; Lactose-binding lectin 1; Lectin galactoside-binding soluble 1; Putative MAPK-activating protein PM12; S-Lac lectin 1
Protein Family	Galectin
UniProt Gene Name	LGALS1
UniProt Synonym Gene Names	Gal-1; HLBP14
UniProt Entry Name	LEG1_HUMAN
NCBI Protein Information	galectin-1; HBL; HPL; gal-1; HLBP14; galaptin; galectin 1; 14 kDa lectin; S-Lac lectin 1; lactose-binding lectin 1; 14 kDa laminin-binding protein; putative MAPK-activating protein PM12; beta-galactoside-binding lectin L-14-I; beta-galactoside-binding pro
NCBI Summary for LGALS1	The galectins are a family of beta-galactoside-binding proteins implicated in modulating cell-cell and cell-matrix interactions. This gene product may act as an autocrine negative growth factor that regulates cell proliferation. [provided by RefSeq, Jul 2008]
UniProt Comments for LGALS1	Galectin-1: May regulate apoptosis, cell proliferation and cell differentiation. Binds beta-galactoside and a wide array of complex carbohydrates. Inhibits CD45 protein phosphatase activity and therefore the dephosphorylation of Lyn kinase. Homodimer. Binds LGALS3BP. Interacts with CD2, CD3, CD4, CD7, CD43 and CD45. Interacts with laminin (via poly-N- acetyllactosamine). Expressed in placenta, maternal decidua and fetal membranes. Within placenta, expressed in trophoblasts, stromal cells, villous endothelium, syncytiotrophoblast apical membrane and villous stroma. Within fetal membranes, expressed in amnion, chorioamniotic mesenchyma and chorion. Expressed in cardiac, smooth, and skeletal muscle, neurons, thymus, kidney and hematopoietic cells. Protein type: Cell adhesion Chromosomal Location of Human Ortholog: 22q13.1 Cellular Component: extracellular matrix; extracellular space; proteinaceous extracellular matrix; cell surface; cytoplasm; intracellular; nucleus Molecular Function: protein binding; signal transducer activity; protein homodimerization activity; lactose binding; laminin binding; galactoside binding; glycoprotein binding Biological Process: myoblast differentiation; response to drug; regulation of apoptosis; plasma cell differentiation; positive regulation of I-kappaB kinase/NF-kappaB cascade; apoptosis; T cell costimulation; positive regulation of erythrocyte aggregation; response to axon injury; signal transduction; multicellular organismal response to stress
Research Articles on LGALS1	**1.** Galectin-1 controls cardiac inflammation and ventricular remodeling during acute myocardial infarction.
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