Galectin-1/LGALS1 Protein, Mouse

Cat. No.:	HY-P74131
Synonyms:	Galectin-1; Gal-1; HLBP14; HPL; S-Lac Lectin 1; LGALS1
Species:	Mouse
Source:	E. coli
Accession:	P16045 (M1-E135)
Gene ID:	16852
Molecular Weight:	Approximately 15 kDa

PROPERTIES

AA Sequence	M A C G L V A S N L N L K P G E C L K V R G E V A S D A K S F V L N L G K D S N N L C L H F N P R F N A H G D A N T I V C N T K E D G T W G T E H R E P A F P F Q P G S I T E V C I T F D Q A D L T I K L P D G H E F K F P N R L N M E A I N Y M A A D G D F K I K C V A F E
Biological Activity	1. Measured by its ability to agglutinate human red blood cells. The ED_{50} for this effect is typically 6-60 μg/mL. 2. Measured in a cell proliferation assay using HUVEC cells. The ED_{50} for this effect is 1.105 μg/mL, corresponding to a specific activity is 904.98 units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, 100 mM β-Lactose, pH 7.4. (Normally trehalose is added as protectant before lyophilization.) or 20 mM PB, 150 mM NaCl, 100 mM β-lactose, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Galectin-1/LGALS1 Protein functions as a versatile lectin with a high affinity for beta-galactoside and a diverse range of complex carbohydrates. Its pivotal role extends to the regulation of apoptosis, cell proliferation, and cell differentiation. Notably, Galectin-1/LGALS1 acts as an inhibitor of CD45 protein phosphatase activity, thereby preventing the dephosphorylation of Lyn kinase. Furthermore, it serves as a potent inducer of T-cell apoptosis and exists as a homodimer.

The protein engages in various interactions, binding to LGALS3BP and interacting with cell surface proteins such as CD2, CD3, CD4, CD6, CD7, CD43, ALCAM, and CD45. Galectin-1/LGALS1 also forms associations with laminin through poly-N-acetyllactosamine binding and interacts with SUSD2. A noteworthy interaction occurs with the cargo receptor TMED10, facilitating translocation from the cytoplasm into the endoplasmic reticulum-Golgi intermediate compartment (ERGIC) and subsequent secretion.

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