

Animal-Free Galectin-1/LGALS1 Protein, Human (His)

Cat. No.:	HY-P70273AF
Synonyms:	Gal-1; 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; LGALS1
Species:	Human
Source:	E. coli
Accession:	P09382 (A2-D135)
Gene ID:	3956
Molecular Weight:	Approximately 15.5 kDa

PROPERTIES

AA Sequence	<p>A C G L V A S N L N L K P G E C L R V R G E V A P D A K S F V L N L G K D S N N</p> <p>L C L H F N P R F N A H G D A N T I V C N S K D G G A W G T E Q R E A V F P F Q</p> <p>P G S V A E V C I T F D Q A N L T V K L P D G Y E F K F P N R L N L E A I N Y M</p> <p>A A D G D F K I K C V A F D</p>
Biological Activity	Measured by its ability to agglutinate human red blood cells. The ED ₅₀ for this effect is <2 µg/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a solution containing 1X PBS, pH 7.4.
Endotoxin Level	<0.1 EU per 1 µg of the protein by the LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
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	<p>The Galectin-1/LGALS1 protein serves as a lectin with the ability to bind beta-galactoside and a diverse range of complex carbohydrates. It plays a pivotal role in the regulation of apoptosis, cell proliferation, and cell differentiation. Galectin-1/LGALS1 exerts its influence by inhibiting the protein phosphatase activity of CD45, consequently impeding the dephosphorylation of Lyn kinase. Additionally, it acts as a potent inducer of T-cell apoptosis. Existing as a homodimer, Galectin-1/LGALS1 forms interactions with a variety of cellular entities, including CD2, CD3, CD4, CD6, CD7, CD43, ALCAM, and CD45. It also binds LGALS3BP, laminin (via poly-N-acetyllactosamine), and SUSD2. Notably, Galectin-1/LGALS1 engages in an interaction with the cargo receptor TMED10, facilitating translocation from the cytoplasm into the endoplasmic</p>
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reticulum-Golgi intermediate compartment (ERGIC) and subsequent secretion.

Caution: Product has not been fully validated for medical applications. For research use only.

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