

## Galectin-1/LGALS1 Protein, Human

<b>Cat. No.:</b>	HY-P73072
<b>Synonyms:</b>	Galectin-1; Gal-1; HLBP14; Galaptin; HBL; LGALS1
<b>Species:</b>	Human
<b>Source:</b>	E. coli
<b>Accession:</b>	P09382 (M1-D135)
<b>Gene ID:</b>	3956
<b>Molecular Weight:</b>	Approximately 15 kDa

### PROPERTIES

<b>AA Sequence</b>	<p>           M 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 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 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 A A D G D F K I K    C V A F D         </p>
<b>Biological Activity</b>	Measured by its ability to agglutinate human red blood cells and the ED <sub>50</sub> is typically 3-30µg/mL.
<b>Appearance</b>	Lyophilized powder
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	<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</p>
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in an interaction 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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**Caution: Product has not been fully validated for medical applications. For research use only.**

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