Animal-Free Galectin-3/LGALS3 Protein, Human (His)

Cat. No.:	HY-P700079AF
Synonyms:	Galectin-3; Gal-3; 35 kDa Lectin; Carbohydrate-Binding Protein 35; CBP 35; Galactose-Specific Lectin 3; Galactoside-Binding Protein; GALBP; IgE-Binding Protein; L-31; Laminin-Binding Protein; Lectin L-29; Mac-2 Antigen; LGALS3; MAC2
Species:	Human
Source:	E. coli
Accession:	P17931 (A2-I250)
Gene ID:	3958
Molecular Weight:	Approximately 27 kDa

PROPERTIES

AA Sequence	A D N F S L H D A L S G S G N P N P Q G W P G A W G N Q P A G A G G Y P G A S Y P G A Y P G Q A P P G A Y P G Q A P P G A Y P G A P G A Y P G A P A P G V Y P G P P S G P G A Y P S S G Q P S A T G A Y P A T G P Y G A P A G P L I V P Y N L P L P G G V V P R M L I T I L G T V K P N A N R I A L D F Q R G N D V A F H F N P R F N E N N R R V I V C N T K L D N N W G R E E R Q S V F P F E S G K P F K I Q V L V E P D H F K V A V N D A H L L Q Y N H R V K K L N E I S K L G I S G D I D L T S A S Y T M I
Biological Activity	Measured by its ability to agglutinate human red blood cells. The ED_{50} for this effect is <8 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.
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	The Galectin-3/LGALS3 Protein is a galactose-specific lectin known for its versatile roles in cellular processes. It binds IgE and, in collaboration with the alpha-3, beta-1 integrin, facilitates CSPG4-induced migration of endothelial cells. Together with DMBT1, it is crucial for the terminal differentiation of columnar epithelial cells during early embryogenesis. In the nucleus, the protein serves as a pre-mRNA splicing factor and is actively involved in acute inflammatory responses,

	influencing neutrophil activation, adhesion, chemoattraction of monocytes and macrophages, opsonization of apoptotic neutrophils, and mast cell activation. Its partnership with TRIM16 allows for the coordinated recognition of membrane damage, triggering the mobilization of core autophagy regulators ATG16L1 and BECN1 in response to damaged endomembranes. The protein likely forms homo- or heterodimers and engages with various partners, including DMBT1, CD6, ALCAM, ITGA3, ITGB1, CSPG4, LGALS3BP, LYPD3, ZFTRAF1, UACA, TRIM16, and TMED10, facilitating diverse cellular interactions, including autophagy and secretion.

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