
Product Data Sheet

Product Name: LGALS1 Human
 Cat. No.: GP20277
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Galectin-1; GAL1; GAL-1; Lectin galactoside-binding soluble 1; Beta-galactoside-binding lectin L-14-I; Lactose-binding lectin 1; S-Lac lectin 1; Galaptin; 14 kDa lectin; HPL; HBL; Putative MAPK-activating protein PM12; GBP; DKFZp686E23103.		
Amino Acid Sequence	MACGLVASNL NLKPGECLRV RGEVAPDAKS FVLNLGKDSN NLCLHFNPRF NAHGDANTIV CNSKDGGAWG TEQREAVFPF QPGSVAEVCITFDQANLTVK LPDGYEFKFP NRLNLEAINY MAADGDFKIK CVAFD.		
Solubility	It is recommended to reconstitute the lyophilized LGALS1 in sterile 18MΩ-cm H ₂ O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	The Galectin-1 protein was lyophilized from a concentrated (1mg/ml) containing 10mM sodium phosphate, pH-7.5.		

Introduction

The galectins are a family of beta-galactoside-binding proteins implicated in modulating cell-cell and cell-matrix interactions. Galectin-1 is an autocrine negative growth factor that regulates cell proliferation. Galectin-1 regulates cell apoptosis and cell differentiation. Galectin-1 binds CD45, CD3 and CD4 & inhibits CD45 protein phosphatase activity and therefore the dephosphorylation of lyn kinase. Galectin-1 and its ligands are one of the master regulators of immune responses as T-cell homeostasis and survival, T-cell immune disorders, inflammation and allergies as well as host/Pathogen interactions. Galectin-1 expression or overexpression in tumors and/or the tissue surrounding them must be considered as a sign of the malignant tumor progression that is often related to the long-range dissemination of tumoral cells (metastasis), to their dissemination into the surrounding normal tissue, and to tumor

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

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immune-escape. Galectin-1 in its oxidized form plays a number of important roles in the regeneration of the central nervous system after injury. The targeted overexpression (or delivery) of Galectin-1 should be considered as a method of choice for the treatment of some kinds of inflammation-related diseases, neurodegenerative pathologies and muscular dystrophies. In contrast, the targeted inhibition of Galectin-1 expression is what should be developed for therapeutic applications against cancer progression. Galectin-1 is thus a promising molecular target for the development of new and original therapeutic tools. There is 88% homology between the human and mouse galectin-1.

Biological Activity

The activity of Human Galectin-1 which is determined by the ability to induce chemotaxis of human THP-1 cells is detectable starting at 100ng/ml, corresponding to a specific activity of 1.0×10^4 units/mg.

Stability

Lyophilized Galectin-1 Recombinant although stable at room temperature for 3 weeks, should be stored desiccated below -18°C . Upon reconstitution Galectin-1 should be stored at 4°C between 2-7 days and for future use below -18°C . For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Background

LGALS1 Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 135 amino acids and having a molecular mass of 14.7kDa. The LGALS1 is purified by proprietary chromatographic techniques.

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