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LGALS1 Human

Galectin-1 Human Recombinant
GRF0225

Product Overview

Name	LGALS1 Human
Description	
Galectin-1 Human Recombinant	
Accession (Primary)	P09382
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.	
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 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.	
Source	
Escherichia Coli.	
Physical Appearance	
Sterile Filtered White lyophilized (freeze-dried) powder.	
Formulation	

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The Galectin-1 protein was lyophilized from a concentrated (1mg/ml) containing 10mM sodium phosphate, pH-7.5.

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.

Purity

Greater than 95.0% as determined by SDS-PAGE.

Amino acid sequence

MACGLVASNL NLKPGECLRV RGEVAPDAKS FVLNLGKDSN NLCLHFNPRF NAHGDANTIV CNSKDGGAWG TEQREAVFPF QPGSVAEVCI TFDQANLTVK LPDGYEFKFP NRLNLEAINY MAADGDFKIK CVAFD.

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 1.0x10 4 units/mg.

Solubility

It is recommended to reconstitute the lyophilized LGALS1 in sterile 18MΩ-cm H2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Protein content

UV spectroscopy at 280 nm using the absorbency value of 0.59 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).

Precautions

LGALS1 Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P09382)