



Galectin-7, human recombinant (rHuLGALS7)

Catalog No: 97459
Lot No: XXXXX
Source: *E. coli*
Synonyms: Galectin-7, Gal-7, HKL-14, PI7, p53-induced gene 1 protein, LGALS7, PIG1, LGALS7B, GAL7, LGALS7A

Background

Galectins are a family of animal lectins with an affinity for beta-galactosides. This family has at least 14 identified members. Galectins share similarities in the CRD (the carbohydrate recognition domain). Galectins are synthesized as cytosolic proteins. Though localized principally in the cytoplasm and lacking a classical signal peptide, galectins can also be stimulated to secretion by non-classical pathways or alternatively targeted to the nucleus. Galectins are involved in modulating cell-cell and cell-matrix interactions. Human Galectin-7 belongs to the prototypical Galectins containing a single CRD, which is initially identified in human epidermis as a monomer. The Galectin-7 expression is induced by tumor suppressor protein p53 and associated with apoptosis. Galectin-7 is a pro-apoptotic protein which functions intracellularly upstream of JNK activation and mitochondrial cytochrome c release. The correlation of Galectin-7 with the UV-induced apoptosis of keratinocytes presents a critical mechanism in the maintenance of epidermal homeostasis. Human Galectin-7 is localized in both nucleus and cytoplasm.

Description

Galectin-7 human recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 135 amino acids and having a molecular mass of 15 kDa. LGALS7 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

LGALS7 was lyophilized from a concentrated (1 mg/ml) solution in 20 mM PBS, pH 7.4.

Solubility

It is recommended to reconstitute the lyophilized Galectin-7 in sterile 18 M Ω -cm H₂O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized LGALS7, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Galectin-7 should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.

Purity

Greater than 95.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

The sequence of the first five N-terminal amino acids was determined and was found to be Ser-Asn-Val-Pro-His.

Activity

The ED₅₀ of Galectin-7 as determined by hemagglutination test is 0.75~3 μ g/ml.

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Usage

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