

Recombinant Human LGALS7

Cat. No. LGALS7-3623H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Galectin-7 produced in E. coli is a single, non-glycosylated, polypeptide chain containing 135 amino acids and having a molecular mass of 15 kDa.
Species	Human
Source	E.coli
Description	Galectins are a family of animal lectins with an affinity for β-galactosides. There are at least 14 members identified. Galectins share similarities in carbohydrate recognition domain (CRD). Galectins are synthesized as cytosolic proteins. Although localized primarily 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. Human Galectin-7 is a member of prototypical Galectins containing a single CRD, which is initially identified in human epidermis as a monomer. Galectin-7 expression is induced by tumor suppressor protein p53 and associated with apoptosis. It is a pro-apoptotic protein that functions intracellularly upstream of JNK activation and mitochondrial cytochrome c release. The association of Galectin-7 with the UV-induced apoptosis of keratinocytes presents an essential mechanism in the maintenance of epidermal homeostasis. Human Galectin-7 is localized in both nucleus and cytoplasm as revealed by the study of LGALS7 gene transfected cell. It shares approximately 79% sequence identity with the mouse protein.
Biological Activity	The ED50 of rHuGalectin-7 as determined by hemagglutination test is 0.75~3 μ g/ml.

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Purity	Greater than 95% as determined by (a) Analysis by RP-HPLC; (b) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.
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.
Endotoxin	Less than 0.1ng/μg (1.0EU/μg) of rHuGalectin-7 as determined by LAL test.
Form	The protein was lyophilized from a concentrated (1mg/ml) solution in 20mM PBS, pH 7.4.
Reconstitution	It is recommended to reconstitute the lyophilized rHuGalectin-7 in sterile 18MΩ-cm H ₂ O not less than 100g/ml, which can then be further diluted to other aqueous solutions.
Storage	Lyophilized rHuGalectin-7 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rHuGalectin-7 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 avoid freeze-thaw cycles.

GENE INFORMATION

Gene Name	LGALS7 lectin, galactoside-binding, soluble, 7 [Homo sapiens]
Official Symbol	LGALS7
Synonyms	LGALS7; GAL7; LGALS7A; lectin, galactoside-binding, soluble, 7; galectin-7; galectin 7; PIG1; TP53I1; HKL-14; Gal-7; p53-induced gene 1 protein; PI7
Gene ID	3963

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mRNA Refseq	NM_002307
Protein Refseq	NP_002298
MIM	600615
Chromosome Location	19q13.2
PDBrendering based on 1bkz.	