

## Galectin-3/LGALS3 Protein, Human, Recombinant

### General Information

Synonyms:	GALBP;CBP35;GAL3;GALIG;MAC2;LGALS2;lectin, galactoside-binding, soluble, 3;L31
Protein Construction:	A DNA sequence encoding the human Galectin3 (P17931) (Met 1-Ile 250) was expressed and purified. Predicted N terminal: Met 1
Species:	Human
Expression Host:	E. coli
Accession:	P17931
Molecular Weight:	26.1 kDa (predicted); 30 kDa (reducing conditions)

### QC Testing

Biological Activity:	Measured by its ability to agglutinate human red blood cells. The ED50 for this effect is typically 3-15 µg/ml.
Purity:	> 97 % as determined by SDS-PAGE
Endotoxin:	< 0.005 EU/µg of the protein as determined by the LAL method
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

LGALS3 (Galectin 3) is a Protein Coding gene. This gene encodes a member of the galectin family of carbohydrate-binding proteins. The encoded protein is characterized by an N-terminal proline-rich tandem repeat domain and a single C-terminal carbohydrate recognition domain. LGALS3 is a beta-galactoside-binding lectin and plays a role in numerous cellular functions including apoptosis, innate immunity, cell adhesion, and T-cell regulation. LGALS3 has an important role in tumor progression through inhibition of apoptosis. LGALS3 expression is associated with

neoplastic transformation and with differentiation of monocytes to macrophages. Elevated expression of LGALS3 has been demonstrated in the synovium of rheumatoid arthritis (RA). Diseases associated with LGALS3 include Follicular Adenoma and Papillary Carcinoma.

### Reference

Dumic J, et al. (2006) Galectin-3: an open-ended story. *Biochim Biophys Acta*. 1760(4): 616-35.

Sharma UC, et al. (2004) Galectin-3 marks activated macrophages in failure-prone hypertrophied hearts and contributes to cardiac dysfunction. *Circulation*. 110(19): 3121-8.

Yan YP, et al. (2009) Galectin-3 mediates post-ischemic tissue remodeling. *Brain Res*. 1288: 116-24.

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Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481