Recombinant Human Galectin-1 Protein

Catalog No	RP00007	**Category**	Protein
Description	Recombinant Human Galectin-1 Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Ala2-Asp135) of human Galectin-1 (Accession #NP_002296.1).		
Bio-Activity	Measured by its ability to agglutinate human red blood cells. The ED_{50} for this effect is typically 0.5-3 µg/ml.		

Sequence Information

Species	Human	**Gene ID**	3956
Tags	No tag	**Swiss Prot**	P09382
Synonyms	GAL1;GBP		
AA Sequence	ACGLVASNLNLKPGECLRVRGEVAPDAKSFVLNLGKDSNNLCLHFNPRFNAHGDANTIVC NSKDGGAWGTEQREAVFPFQPGSVAEVCITFDQANLTVKLPDGYEFKFPNRLNLEAINYM AADGDFKIKCVAFD		

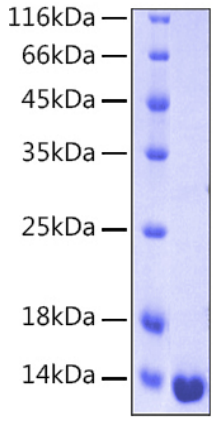
Product information

Source	*E. coli*
Purity	> 95% by SDS-PAGE.
Endotoxin	< 0.1 EU/µg of the protein by LAL method.
Formulation	Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.4.
Reconstitution	Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water.
Storage	Store the lyophilized protein at -20°C to -80 °C for long term. After reconstitution, the protein solution is stable at -20 °C for 3 months, at 2-8 °C for up to 1 week. **Avoid repeated freeze/thaw cycles.**

Background

Galectin-1, also known as LGALS1 (lectin, galactoside-binding, soluble 1), is a 135 amino acid (aa), 14 kDa, pleiotropic, Non-glycosylated, monomeric or homodimeric carbohydrate-binding protein of the prototype galectin family. Galectins lack a classical signal peptide and can be localized to the cytosolic compartments, or secreted by non-classical pathways. Secreted Galectin-1 has immunosuppressive and anti-inflammatory properties and suppresses acute and chronic inflammation and autoimmunity. It contributes to negative selection of developing T cells, immunosuppression by regulatory T cells, resolution of the inflammatory response, and inhibition of immune cell migration, inflammatory cytokine production, and mast cell degranulation. Galectin-1 contributes to different steps of tumour progression including cell adhesion, migration and tumour-immune escape, suggesting that blockade of galectin-1 might result in therapeutic benefits in cancer. Several potential glycoprotein ligands for galectin-1 have been identified, including lysosome-associated membrane glycoproteins and fibronectin, laminin, as well as T-cell glycoproteins CD43 and CD45. Evidence points to Gal-1 and its ligands as one of the master regulators of such immune responses as T-cell homeostasis and survival, T-cell immune disorders, inflammation and allergies as well as host-pathogen interactions.

SDS-PAGE



Recombinant Human Galectin-1 was determined by SDS-PAGE under reducing conditions with Coomassie Blue, showing a band at 14 kDa.

Bioactivity

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