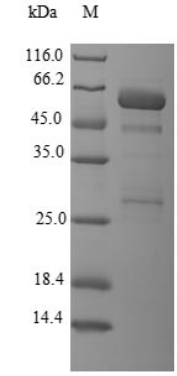
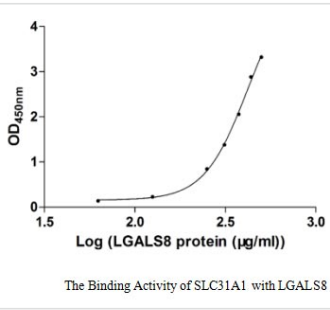
Recombinant Human Galectin-8 (LGALS8) (Active)

Product Code	CSB-EP012894HU
Relevance	Lectin with a marked preference for 3'-O-sialylated and 3'-O-sulfated glycans.
Abbreviation	Recombinant Human LGALS8 protein (Active)
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	O00214
Product Type	Other
Immunogen Species	Homo sapiens (Human)
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized SLC31A1 at 5 μg/ml can bind human LGALS8, the EC50 of human LGALS8 is 373.90-524.30 μg/ml.
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MMLSLNNLQNIIYNPVIPFVGTIPDQLDPGTLIVIRGHVPSDADRFQVDLQNGSS MKPRADVAFHFNPRFKRAGCIVCNTLINEKWGREEITYDTPFKREKSFEIVIMV LKDKFQVAVNGKHTLLYGHRIGPEKIDTLGIYGKVNIHSIGFSFSSDLQSTQASS LELTEISRENVPKSGTPQLRLPFAARLNTPMGPGRTVVVKGEVNANAKSFNVD LLAGKSKDIALHLNPRLNIKAFVRNSFLQESWGEEERNITSFPFSPGMYFEMIIY CDVREFKVAVNGVHSLEYKHRFKELSSIDTLEINGDIHLLEVRSW
Research Area	Cancer
Source	E.coli
Target Names	LGALS8
Expression Region	1-317aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal GST-tagged
Mol. Weight	62.8kDa
Protein Length	Full Length
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Activity
Measured by its binding ability in a functional ELISA. Immobilized SLC31A1 at 5 μg/ml can bind human LGALS8, the EC_{50} of human LGALS8 is 373.90-524.30 μg/ml.

Description

Recombinant Human Galectin-8 (LGALS8) is a full-length protein expressed in E. coli with an N-terminal GST tag. The protein achieves a purity level above 90% as assessed by SDS-PAGE, which appears to provide reliable quality for research applications. Its biological activity has been confirmed through binding capacity in a functional ELISA, where it binds to immobilized SLC31A1 with an EC50 range of 373.90-524.30 μg/ml. This suggests consistent performance in experimental settings.

Galectin-8 belongs to the galectin family, known for binding beta-galactoside sugars. It likely plays important roles in various biological processes, including cell adhesion, migration, and immune response modulation. Galectin-8 appears to be involved in intracellular signaling pathways. Numerous studies have focused on this protein due to its significance in cellular interactions and potential implications in various physiological and pathological processes.

Potential Applications

Note: The applications listed below are based on what we know about this protein's biological functions, published research, and experience from experts in the field. However, we haven't fully tested all of these applications ourselves yet. We'd recommend running some preliminary tests first to make sure they work for your specific research goals.

1. Protein-Protein Interaction Studies with SLC31A1

The demonstrated binding activity between LGALS8 and SLC31A1 in functional ELISA provides a foundation for investigating this protein-protein interaction in detail. Researchers can use this recombinant protein to characterize binding

kinetics, determine optimal binding conditions, and map interaction domains through competitive binding assays. The GST tag allows for purification and immobilization strategies that support surface plasmon resonance or other biophysical binding studies. This application could help elucidate the molecular mechanisms underlying LGALS8-SLC31A1 interactions in cellular contexts.

2. GST Pull-Down Assays for Binding Partner Identification

The N-terminal GST tag makes this protein well-suited for GST pull-down experiments to identify novel LGALS8 binding partners from cell lysates or protein libraries. High purity (>90%) appears to ensure minimal background interference in these assays, while the full-length construct (1-317aa) preserves all potential binding domains. Researchers can immobilize the GST-LGALS8 fusion protein on glutathione-sepharose beads and screen for interacting proteins using mass spectrometry or Western blot analysis. This approach may reveal previously unknown components of LGALS8-mediated signaling pathways or regulatory networks.

3. Antibody Development and Validation

This highly pure, full-length recombinant LGALS8 serves as what appears to be an excellent antigen for generating specific antibodies against human galectin-8. The protein can be used to immunize animals for polyclonal antibody production or as a screening antigen for monoclonal antibody development. The recombinant protein also provides a standardized positive control for validating antibody specificity and determining optimal working concentrations in various immunoassays. The GST tag allows for tag-specific detection methods during antibody characterization studies.

4. Functional ELISA Development and Optimization

Given the established activity testing method using SLC31A1 binding, this recombinant protein can serve as a reference standard for developing and optimizing functional ELISA protocols. Researchers can use the known EC50 range (373.90-524.30 μg/ml) as a benchmark for assay sensitivity and reproducibility testing. The protein enables standardization of binding assays across different laboratories. It also supports the development of competitive binding assays to screen for small molecule inhibitors or other galectin-8 ligands.

5. Biochemical Characterization and Structure-Function Studies

The full-length, biologically active recombinant protein provides what appears to be an ideal tool for comprehensive biochemical characterization of LGALS8 properties. Researchers can investigate protein stability under various conditions, determine optimal storage parameters, and analyze structural features through techniques like circular dichroism spectroscopy. The demonstrated binding activity allows for structure-function relationship studies. This includes examining the effects of pH, ionic strength, and temperature on protein-protein interactions, which may contribute to a deeper understanding of galectin-8 biology.

Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.