Recombinant Rat GAL1 Protein(GST Tag)

Catalog Number: PDER100103

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

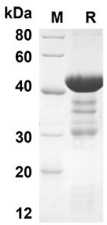
Description

Species	Rat
Source	E.coli-derived Rat GAL1 protein Ala2-Glu135, with an N-terminal Gst
Calculated MW	40.7 kDa
Observed MW	45 kDa
Accession	P11762
Bio-activity	Not validated for activity

Properties

Purity	> 90% as determined by reducing SDS-PAGE.
Endotoxin	< 10 EU/mg of the protein as determined by the LAL method
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis.

Data



SDS-PAGE analysis of Rat GAL1 proteins, 2 μg/lane of Recombinant Rat GAL1 proteins was resolved with an SDS-PAGE under reducing conditions, showing bands at 40.7KD

Background

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Galectin-1 (Gal-1, GAL1), is a member of the galectins, a family of animal lectins ranging from Caenorhabditis elegans to humans, which is defined by their affinity for beta-galactosides and by significant sequence similarity in the carbohydrate-binding site. It is a homodimer with an a subunit molecular mass of 14.5 kDa, which contains six cysteine residues per subunit. The cysteine residues should be in a free state to maintain a molecular structure that is capable of showing lectin activity. This endogenous lectin widely expressed at sites of inflammation and tumor growth has been postulated as an attractive immunosuppressive agent to restore immune cell tolerance and homeostasis in autoimmune and inflammatory settings. On the other hand, galectin-1 contributes to different steps of tumor progression including cell adhesion, migration, and tumor-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.

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