Recombinant Human Chitotriosidase/CHIT1 Protein (His Tag)

Catalog Number: PKSH031194

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

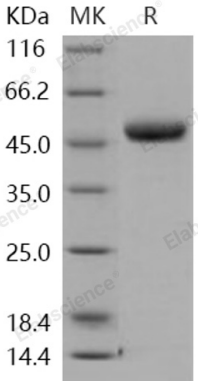
Description

Species	Human
Source	HEK293 Cells-derived Human Chitotriosidase/CHIT1 protein Met 1-Asn 466, with an C-terminal His
Calculated MW	50.8 kDa
Observed MW	48 kDa
Accession	NP_003456.1
Bio-activity	Not validated for activity

Properties

Purity	> 94 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg 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°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 12.5mM Tris, 75mM NaCl, 50% glycerol, pH 7.5 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 94 % as determined by reducing SDS-PAGE.

Background

Chitotriosidase, also known as Chitinase-1 and CHIT1, is a member of the glycosyl hydrolase 18 family and Chitinase class II subfamily. It is a member of the mammalian chitinase family, structurally homologous to chitinases from other species, is synthesized and secreted by specifically activated macrophages. Chitotriosidase is a polymer of N-acetylglucosamine. Serum and plasma chitotriosidase activity is usually measured as the first step in diagnosis of Gaucher disease. Monitoring chitotriosidase activity is widely used during treatment of this pathology by enzyme replacement therapy. Its elevated plasma level reflects gradual intralysosomal accumulation in Gaucher cells (lipid-loaded macrophages). Macrophages overloaded by the enzyme accumulated in lysosomal material (lipids) were shown to secrete chitotriosidase; its increased expression was noted in several lysosomal storage diseases and atherosclerosis. In addition to lipid storage disorders, where Chit activity has longer been used as a marker of disease activity and therapeutic response, elevation of plasma Chit may occur in hematological disorders with storage of erythrocyte membrane breakdown products as thalassemia and different systemic infectious diseases sustained by fungi and other pathogens. Recently, increased Chit activity was demonstrated in CNS from patients with different neurological disorders. Chitotriosidase is believed to play a role in mechanisms of immunity and protection against chitin-containing pathogens.

Toll-free: 1-888-852-8623
Tel: 1-832-243-6086
Fax: 1-832-243-6017
Web: www.elabscience.com
Email: techsupport@elabscience.com