Human SLC6A3 / DAT1 Protein, His Tag (MALS verified)

Catalog # SL3-H52H3

Synonym

DA transporter,DATDAT1,Solute carrier family 6 member 3,sodium-dependent dopamine transporter

Source

Human SLC6A3, His Tag (SL3-H52H3) is expressed from human 293 cells (HEK293). It contains AA Ala 161 - Arg 237 (Accession # Q01959-1).

Molecular Characterization

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 10.5 kDa. The protein migrates as 25-35 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

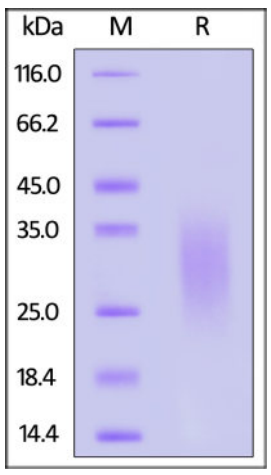
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

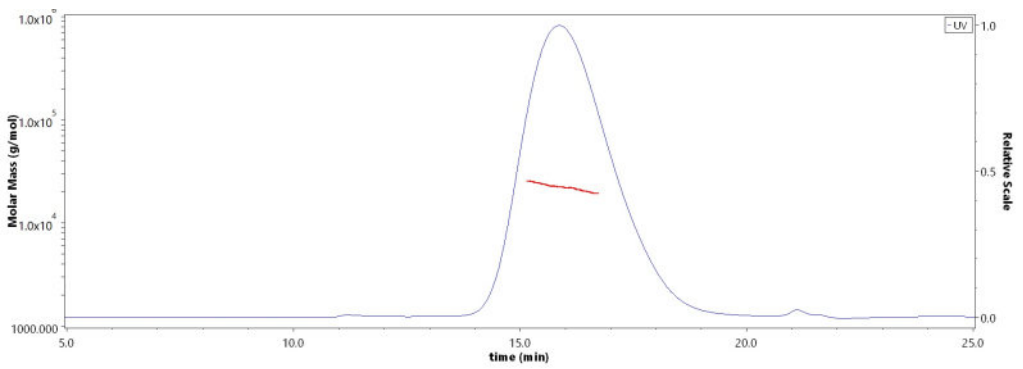
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Human SLC6A3, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

SEC-MALS



The purity of Human SLC6A3, His Tag (Cat. No. SL3-H52H3) is more than 90% and the molecular weight of this protein is around 19-25 kDa verified by SEC-MALS.
Report

Background

The dopamine transporter (DAT) is a 70-80 kDa member of the Na+-neurotransmitter symporter family of transmembrane (TM) proteins coded by gene SLC6A3. DAT plays a crucial role in the synaptic clearance of dopamine (DA). It terminates the action of dopamine by its high affinity sodium-dependent reuptake into presynaptic terminals. One molecule of DA is accompanied by two Na+ and one Cl- ion. Molecules such as amphetamine both competitively inhibit DA uptake, and

induce DA release through the DAT, increasing the rewarding property of DA. Human DAT is a 620 amino acid (aa), 12 TM phosphoglycoprotein with an N- and C-terminal cytoplasmic domain. It exists as a disulfide-linked oligomer on the cell surface.

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.