Human DDOST / OST48 Protein

Catalog Number: **12463-HNCE**

General Information

Gene Name Synonym:

AGER1; CDG1R; OKSWcl45; OST; OST48; WBP1

Protein Construction:

A DNA sequence encoding the human DDOST (P39656-1) extracellular domain (Ser 43-Pro 427) was expressed and purified, with additional two amino acids (Gly & Pro) at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Gly

Molecular Mass:

The recombinant human DDOST consists of 387 amino acids and has a calculated molecular mass of 42.7 kDa. It migrates as an approximately 46 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM Tris, 150mM NaCl, pH 8.0

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

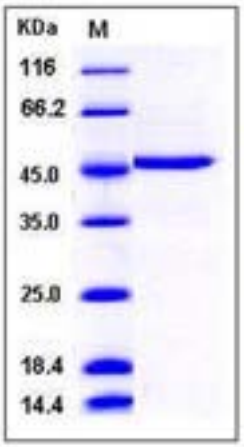
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

The enzyme oligosaccharyltransferase (dolichyl-diphosphooligosaccharide-protein glycosyltransferase) (DDOST), or 48-kDa subunit (OST48) is one of the catalytic subunits in this complex, exerts a typical type I membrane topology, containing a large luminal domain, a hydrophobic transmembrane domain and a short cytosolic peptide tail. DDOST/OST48 catalyzes the transfer of a high-mannose oligosaccharide (GlcNac2Man9Glc3) from a dolichol-linked oligosaccharide donor (dolichol-P-GlcNac2Man9Glc3) onto the asparagine acceptor site within an Asn-X-Ser/Thr consensus motif in nascent polypeptide chains across the membrane of the endoplasmic reticulum. The mammalian oligosaccharyltransferase (OST) is an oligomeric complex composed of three type I transmembrane proteins of the endoplasmic reticulum: ribophorin I (RI), ribophorin II (RII), and OST48. OST48 is not a glycoprotein and is not recognized by antibodies to either ribophorin. Like ribophorins I and II, OST48 was found to be an integral membrane protein, with the majority of the polypeptide located within the lumen of the endoplasmic reticulum (ER). OST48 does not show significant amino acid sequence homology to either ribophorin I or II. It had been found that only the luminal domain of RI contains ER retention information. The dilysine motif in OST48 functions as an ER localization motif because OST48 in which the two lysine residues are replaced by serine (OST48ss) is no longer retained in the ER and is found instead also at the plasma membrane.

References

1.Silberstein S, *et al.* (1992) The 48-kDa subunit of the mammalian oligosaccharyltransferase complex is homologous to the essential yeast protein WBP1. J Biol Chem. 267(33): 23658-63. 2.Fu J, *et al.* (1997) Interactions among subunits of the oligosaccharyltransferase complex. J Biol Chem. 272(47): 29687-92. 3.Yamagata T, *et al.* (1997) Genomics. Genome organization of human 48-kDa oligosaccharyltransferase (DDOST). 45(3): 535-40.