

STT3A / ITM1 Antibody (clone 4D4)

Mouse Monoclonal Antibody Catalog # ALS13348

Specification

STT3A / ITM1 Antibody (clone 4D4) - Product Information

Application Primary Accession Reactivity Host Clonality Calculated MW WB <u>P46977</u> Human Mouse Monoclonal 81kDa KDa

STT3A / ITM1 Antibody (clone 4D4) - Additional Information

Gene ID 3703

Other Names Dolichyl-diphosphooligosaccharide--protein glycosyltransferase subunit STT3A, Oligosaccharyl transferase subunit STT3A, STT3-A, 2.4.99.18, B5, Integral membrane protein 1, Transmembrane protein TMC, STT3A, ITM1, TMC

Reconstitution & Storage Store at -20°C. Aliquot to avoid freeze/thaw cycles.

Precautions STT3A / ITM1 Antibody (clone 4D4) is for research use only and not for use in diagnostic or therapeutic procedures.

STT3A / ITM1 Antibody (clone 4D4) - Protein Information

Name STT3A (HGNC:6172)

Synonyms ITM1, TMC

Function

Catalytic subunit of the oligosaccharyl transferase (OST) complex that catalyzes the initial transfer of a defined glycan (Glc(3)Man(9)GlcNAc(2) in eukaryotes) from the lipid carrier dolicholpyrophosphate to an asparagine residue within an Asn-X-Ser/Thr consensus motif in nascent polypeptide chains, the first step in protein N-glycosylation (PubMed:31831667, PubMed:31831667, PubMed:34653363). Nglycosylation occurs cotranslationally and the complex associates with the Sec61 complex at the

channel-forming translocon complex that mediates protein translocation across the endoplasmic reticulum (ER). All subunits are required for a maximal enzyme activity. This subunit contains the active site and the acceptor peptide and donor lipid- linked oligosaccharide (LLO) binding pockets (By similarity). STT3A is present in the majority of OST complexes and mediates cotranslational N-glycosylation of most sites on target proteins, while STT3B- containing complexes are required



for efficient post-translational glycosylation and mediate glycosylation of sites that have been skipped by STT3A (PubMed:19167329).

Cellular Location

Endoplasmic reticulum. Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:P46978}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P46978}

Tissue Location

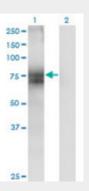
Expressed at high levels in placenta, liver, muscle and pancreas, and at very low levels in brain, lung and kidney Expressed in skin fibroblasts (at protein level)

STT3A / ITM1 Antibody (clone 4D4) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

STT3A / ITM1 Antibody (clone 4D4) - Images



Western blot of ITM1 expression in transfected 293T cell line by ITM1 monoclonal antibody clone 4D4.

STT3A / ITM1 Antibody (clone 4D4) - Background

Catalytic subunit of the N-oligosaccharyl transferase (OST) complex which catalyzes the transfer of a high mannose oligosaccharide from a lipid-linked oligosaccharide donor to an asparagine residue within an Asn-X-Ser/Thr consensus motif in nascent polypeptide chains. N-glycosylation occurs cotranslationally and the complex associates with the Sec61 complex at the channel-forming translocon complex that mediates protein translocation across the endoplasmic reticulum (ER). SST3A seems to be involved in complex substrate specificity. STT3A is present in the majority of OST complexes and mediates cotranslational N-glycosylation of most sites on target proteins, while STT3B-containing complexes are required for efficient cotranslational glycosylation and mediate glycosylation of sites that have been skipped by STT3A.

STT3A / ITM1 Antibody (clone 4D4) - References



Hong G.,et al.Genomics 31:295-300(1996). Lissy N.A.,et al.Biochim. Biophys. Acta 1306:137-141(1996). Ota T.,et al.Nat. Genet. 36:40-45(2004). Kalnine N.,et al.Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases. Taylor T.D.,et al.Nature 440:497-500(2006).