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STT3A Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP22179c

Product Information

Application	WB, E
Primary Accession	P46977
Other Accession	Q2KJI2, P46978, Q5RCE2
Reactivity	Human, Mouse
Predicted	Bovine, Mouse
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB56284
Calculated MW	80530

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
Target/Specificity	This STT3A antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 476-507 amino acids from the Central region of human STT3A.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	STT3A Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	STT3A {ECO:0000303|PubMed:31296534, ECO:0000312|HGNC:HGNC:6172}
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 dolichol- pyrophosphate to an asparagine residue within an Asn-X-Ser/Thr consensus motif in nascent polypeptide chains, the first step in protein N-glycosylation (PubMed:19167329, PubMed:31296534, PubMed:31831667, PubMed:34653363, PubMed:38670073, PubMed:39509507). 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) (PubMed:19167329, PubMed:31296534, PubMed:31831667, PubMed:34653363, PubMed:38670073, PubMed:39509507). All subunits are required for a maximal enzyme activity (PubMed:19167329, PubMed:31831667, PubMed:34653363). This subunit contains the active site and the acceptor peptide and donor lipid-linked oligosaccharide (LLO) binding pockets (PubMed:19167329). 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, PubMed:38670073, PubMed:39509507). STT3A-containing OST-A complex is also required to prevent hyperglycosylation of some target proteins by preventing glycosylation of facultative sites before folding of target proteins is completed (PubMed:39509507).
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)

Background

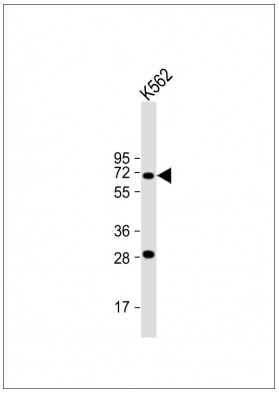
Catalytic subunit of the N-oligosaccharyl transferase (OST) complex which catalyzes the transfer of a high mannose oligosaccharide from a lipid-linked oligosaccharide donor to an asparagine residue within an Asn-X-Ser/Thr consensus motif in nascent polypeptide chains. N-glycosylation occurs cotranslationally 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.

References

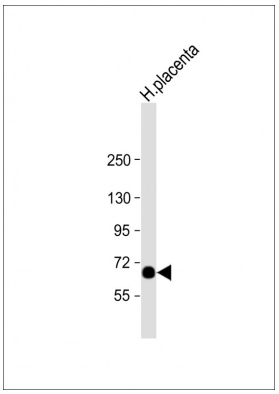
Hong G.,et al.Genomics 31:295-300(1996).
Lissy N.A.,et al.Biochim. Biophys. Acta 1306:137-141(1996).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Kalnine N.,et al.Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.
Taylor T.D.,et al.Nature 440:497-500(2006).

Images

Anti-STT3A Antibody (Center) at 1:2000 dilution + K562 whole cell lysate Lysates/proteins at 20 µg per lane.



Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 81 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Anti-STT3A Antibody (Center) at 1:2000 dilution + human placenta lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 81 kDa Blocking/Dilution buffer: 5% NFDM/TBST.