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DAD1 Antibody

Catalog # ASC10243

Product Information

Application	WB, IF, ICC, E
Primary Accession	P61803
Other Accession	AAH09798, 14602573
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	12497
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	DAD1 antibody can be used for detection of DAD1 by Western blot at 0.5 to 2 g/mL. Despite its predicted molecular weight, DAD1 migrates at ~22 kDa in SDS-PAGE. Antibody can also be used for immunocytochemistry starting at 10 g/mL. For immunofluorescence start at 10 g/mL.

Additional Information

Gene ID	1603
Other Names	DAD1 Antibody: OST2, Dolichyl-diphosphooligosaccharide--protein glycosyltransferase subunit DAD1, Defender against cell death 1, Oligosaccharyl transferase subunit DAD1, defender against cell death 1
Target/Specificity	DAD1;
Reconstitution & Storage	DAD1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	DAD1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DAD1 (HGNC:2664)
Function	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:22467853, PubMed:31831667). 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). All subunits are required for a maximal enzyme activity (By similarity). Required for the assembly of both SST3A- and SS3B- containing OST complexes. Loss of the DAD1 protein triggers apoptosis (PubMed:22467853).
Cellular Location	Endoplasmic reticulum membrane; Multi-pass membrane protein

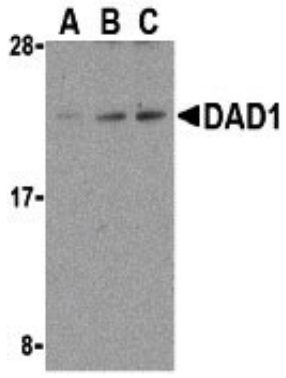
Background

DAD1 Antibody: Defender of cell death 1 (DAD1) was initially discovered in BHK21 cells as a negative regulator of programmed cell death, a process important for normal organism development and tissue homeostasis. DAD1 was later shown to be a subunit of the mammalian oligosaccharyltransferase complex and is required for its function and structural integrity. Mice lacking DAD1 express abnormal N-linked glycoproteins and undergo increased apoptotic-associated embryonic death. Furthermore, overexpression of DAD1 mRNA is seen in some human hepatocellular carcinomas, indicating it may also play a role in carcinogenesis. It should be noted that DAD1 is not related to the inhibitor of apoptosis proteins (IAP) family and does not contain any baculoviral IAP repeat (BIR) domains.

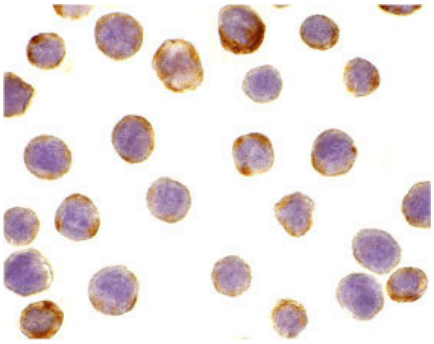
References

Nakashima T, Sekiguchi T, Kuraoka A, et al. Molecular cloning of a human cDNA encoding a novel protein, DAD1, whose defect causes apoptotic cell death in hamster BHK21 cells. Mol. Cell Biol. 1993; 13:6367-74.
Stellar H. Mechanisms and genes of cellular suicide. Science 1995; 267:1445-9.
Gilmore R and Kelleher DJ. DAD1, the defender against apoptotic cell death, is a subunit of the mammalian oligosaccharyltransferase. Proc. Natl. Acad. Sci. USA 1997; 94:4994-9.
Sanjay A, Fu J, and Kreibich G. DAD1 is required for the function and the structural integrity of the oligosaccharyltransferase complex. J. Biol. Chem. 1998; 273:26094-9.

Images

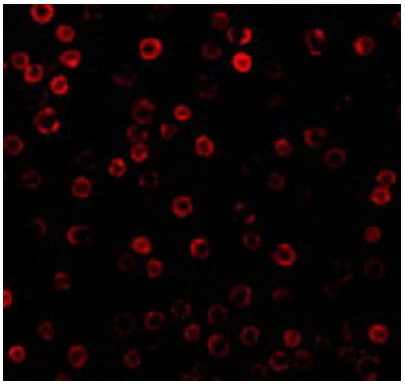


Western blot analysis of DAD1 in HepG2 cell lysate with DAD1 antibody at (A) 0.5, (B) 1, and (C) 2 µg/mL.



Immunocytochemistry of DAD1 in HepG2 cells with DAD1 antibody at 10 µg/mL.

Immunofluorescence of DAD1 in HepG2 cells with DAD1 antibody at 10 µg/mL.



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