

ORMDL1 Antibody

Catalog # ASC11327

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9POS3
Other Accession	NP_057551 , 189458852
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	17371
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	ORMDL1 antibody can be used for detection of ORMDL1 by Western blot at 1 - 2 μ g/mL. Antibody can also be used for immunohistochemistry starting at 5 μ g/mL. For immunofluorescence start at 20 μ g/mL.

Additional Information

Gene ID	94101
Other Names	ORM1-like protein 1, Adoplin-1, ORMDL1
Target/Specificity	ORMDL1; ORMDL1 antibody may cross-react with other ORMDL protein family members.
Reconstitution & Storage	ORMDL1 antibody can be stored at 4 °C, stable for 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	ORMDL1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ORMDL1
Function	Plays an essential role in the homeostatic regulation of sphingolipid de novo biosynthesis by modulating the activity of the serine palmitoyltransferase (SPT) in response to ceramide levels (PubMed: 20182505). When complexed to SPT, the binding of ceramides to its N-terminus stabilizes a conformation that block SPT substrate entry, hence preventing SPT catalytic activity. Through this mechanism, maintains ceramide levels at sufficient concentrations for the production of complex sphingolipids, but which prevents the accumulation of ceramides to levels that trigger apoptosis (By similarity).
Cellular Location	Endoplasmic reticulum membrane; Multi-pass membrane protein

Tissue Location

Widely expressed. Expressed in adult and fetal heart, brain, lung, liver, skeletal muscle and kidney. Expressed in adult pancreas and placenta and in fetal spleen and thymus. Expressed at intermediate level in pancreas, placenta and brain but low in skeletal muscle and lung.

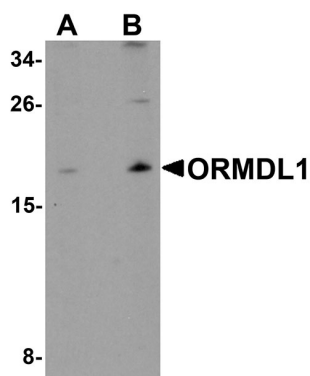
Background

ORMDL1 Antibody: The ORMDL (ORM1-like) family of proteins consist of ORMDL1, ORMDL2 and ORMDL3 that may play roles in gamma-secretase complex maturation. Localized to the membrane of the endoplasmic reticulum, ORMDLs are widely expressed and are implicated in the expression of Presenilin (PSI) which is involved in Alzheimer's disease (AD). Expression of ORMDL1 is down-regulated in PSI mutations, suggesting a possible role as a therapeutic target for AD. ORMDLs have recently been identified as a potential risk factor for childhood asthma.

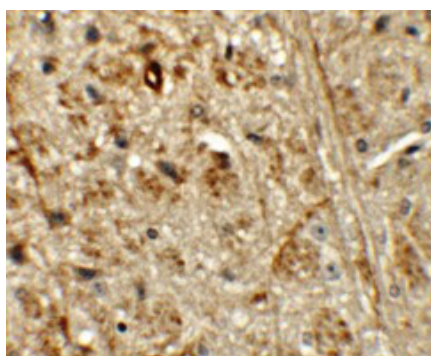
References

Hjelmqvist L, Tuson M, Marfany G, et al. ORMDL proteins are a conserved new family of endoplasmic reticulum membrane proteins. *Genome Biol.* 2002; 3(6): RESEARCH0027
Araki W, Takahashi-Sasaki N, Chui DH, et al. A family of membrane proteins associated with Presenilin expression and α -secretase function. *FASEB J.* 2007; 22: 819-827
Moffatt MF, Kabesch M, Liang L, et al. Genetic variants regulating ORMDL3 expression contribute to the risk of childhood asthma. *Nature* 2007; 448: 470-473
Breslow DK, Collins SR, Bodenmiller B, et al. Orm family proteins mediate sphingolipid homeostasis. *Nature.* 2010; 463(7284):1048-53

Images

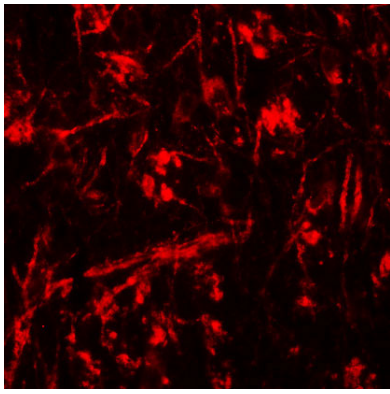


Western blot analysis of ORMDL1 in SK-N-SH Cell lysate with ORMDL1 antibody at (A) 1 μ g/mL and (B) 2 μ g/mL.



Immunohistochemistry of ORMDL1 in mouse brain tissue with ORMDL1 antibody at 5 μ g/mL.

Immunofluorescence of ORMDL1 in mouse brain tissue with ORMDL1 antibody at 20 μ g/mL.



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