10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ORMDL3 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP10739c

Product Information

Application	WB, E
Primary Accession	Q8N138
Other Accession	Q6QI25, Q9CPZ6, Q5XJR6, Q0VD15, Q9CQZ0, Q53FV1, Q5E972, Q5XH57, Q9P0S3, Q8JFB7, Q29RQ9, NP_644809.1
Reactivity	Human, Rat, Mouse
Predicted	Rat, Zebrafish, Bovine, Xenopus, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	17495
Antigen Region	53-81

Additional Information

Gene ID	94103
Other Names	ORM1-like protein 3, ORMDL3
Target/Specificity	This ORMDL3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 53-81 amino acids from the Central region of human ORMDL3.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. 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	ORMDL3 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ORMDL3
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, PubMed:30700557,

PubMed:37308477). 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 (PubMed:37308477).

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

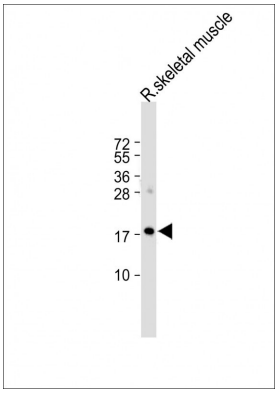
Background

Negative regulator of sphingolipid synthesis. May indirectly regulate endoplasmic reticulum-mediated Ca(+2) signaling.

References

Fransen, K., et al. Hum. Mol. Genet. 19(17):3482-3488(2010) Liu, X., et al. Nat. Genet. 42(8):658-660(2010) Halapi, E., et al. Eur. J. Hum. Genet. 18(8):902-908(2010) Dobbins, S.E., et al. Int. J. Cancer (2010) In press : McGovern, D.P., et al. Nat. Genet. 42(4):332-337(2010)

Images



All lanes : Anti-ORMDL3 Antibody (Center) at 1:2000 dilution Lane 1: rat skeletal muscle lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 17 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- ORMDL3 regulates poly I:C induced inflammatory responses in airway epithelial cells
- ORMDL3 is an inducible lung epithelial gene regulating metalloproteases, chemokines, OAS, and ATF6.
- ORMDL3 modulates store-operated calcium entry and lymphocyte activation.
- The ORMDL3 Asthma Gene Regulates ICAM1 and has Multiple Effects on Cellular Inflammation.
- Staurosporines decrease ORMDL proteins and enhance sphingomyelin synthesis resulting in depletion of plasmalemmal phosphatidylserine.
- ORMDL proteins regulate ceramide levels during sterile inflammation.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.