

### MFSD2A Antibody (C-Terminus)

Rabbit Polyclonal Antibody Catalog # ALS14002

#### **Specification**

### MFSD2A Antibody (C-Terminus) - Product Information

Application IF, WB, IHC Primary Accession Q8NA29

Reactivity Human, Mouse, Rat

Host Rabbit
Clonality Polyclonal
Calculated MW 60kDa KDa

## MFSD2A Antibody (C-Terminus) - Additional Information

#### **Gene ID** 84879

#### **Other Names**

Sodium-dependent lysophosphatidylcholine symporter 1, NLS1, Sodium-dependent LPC symporter 1, Major facilitator superfamily domain-containing protein 2A, MFSD2A, MFSD2, NLS1

### **Target/Specificity**

Human MFSD2A

#### **Reconstitution & Storage**

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

#### **Precautions**

MFSD2A Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

### MFSD2A Antibody (C-Terminus) - Protein Information

Name MFSD2A {ECO:0000303|PubMed:18694395, ECO:0000312|HGNC:HGNC:25897}

#### **Function**

Sodium-dependent lysophosphatidylcholine (LPC) symporter, which plays an essential role for blood-brain barrier formation and function (PubMed:<a

href="http://www.uniprot.org/citations/24828040" target="\_blank">24828040</a>, PubMed:<a href="http://www.uniprot.org/citations/32572202" target="\_blank">32572202</a>, PubMed:<a href="http://www.uniprot.org/citations/34135507" target="\_blank">34135507</a>). Specifically expressed in endothelium of the blood-brain barrier of micro-vessels and transports LPC into the brain (By similarity). Transport of LPC is essential because it constitutes the major mechanism by which docosahexaenoic acid (DHA), an omega-3 fatty acid that is essential for normal brain growth and cognitive function, enters the brain (PubMed:<a

href="http://www.uniprot.org/citations/26005868" target="\_blank">26005868</a>, PubMed:<a href="http://www.uniprot.org/citations/34135507" target="\_blank">34135507</a>). Transports LPC carrying long-chain fatty acids such LPC oleate and LPC palmitate with a minimum acyl chain



length of 14 carbons (By similarity). Does not transport docosahexaenoic acid in unesterified fatty acid (By similarity). Specifically required for blood-brain barrier formation and function, probably by mediating lipid transport (By similarity). Not required for central nervous system vascular morphogenesis (By similarity). Acts as a transporter for tunicamycin, an inhibitor of asparagine-linked glycosylation (PubMed:<a href="http://www.uniprot.org/citations/21677192" target="\_blank">21677192</a>). In placenta, acts as a receptor for ERVFRD-1/syncytin-2 and is required for trophoblast fusion (PubMed:<a href="http://www.uniprot.org/citations/18988732" target="\_blank">18988732</a>, PubMed:<a href="http://www.uniprot.org/citations/23177091" target=" blank">23177091</a>).

#### **Cellular Location**

Cell membrane; Multi-pass membrane protein. Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:Q9DA75}; Multi-pass membrane protein. Note=Cytoplasmic punctae that may represent vesicles shuttling between the endoplasmic reticulum and the plasma membrane (PubMed:21677192).

#### **Tissue Location**

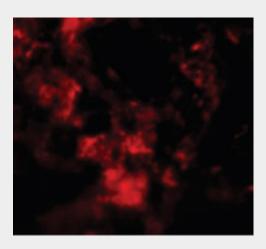
In placenta, associated with trophoblast cells.

### MFSD2A Antibody (C-Terminus) - Protocols

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

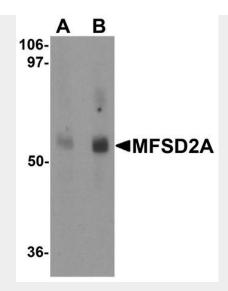
- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- <u>Immunofluorescence</u>
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

#### MFSD2A Antibody (C-Terminus) - Images

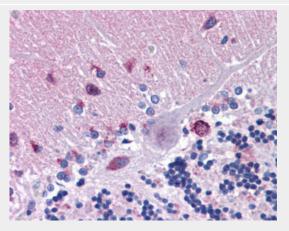


Immunofluorescence of MFSD2A in Rat Lung cells with MFSD2A antibody at 20 ug/ml.

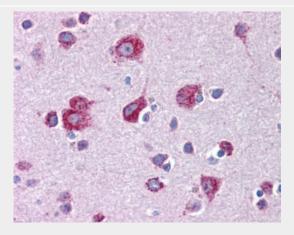




Western blot analysis of MFSD2A in rat lung tissue lysate with MFSD2A antibody at (A) 1 and (B)...



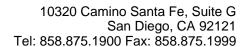
Anti-MFSD2A antibody IHC of human brain, cerebellum.



Anti-MFSD2A antibody IHC of human brain, cortex.

# MFSD2A Antibody (C-Terminus) - Background

Sodium-dependent lysophosphatidylcholine (LPC) symporter, which plays an essential role for blood-brain barrier formation and function. Specifically expressed in endothelium of the blood-brain barrier of micro-vessels and transports LPC into the brain. Transport of LPC is essential because it constitutes the major mechanism by which docosahexaenoic acid (DHA), an omega- 3 fatty acid that is essential for normal brain growth and cognitive function, enters the brain. Transports LPC





carrying long-chain fatty acids such LPC oleate and LPC palmitate with a minimum acyl chain length of 14 carbons. Does not transport docosahexaenoic acid in unesterified fatty acid. Specifically required for blood-brain barrier formation and function, probably by mediating lipid transport. Not required for central nervous system vascular morphogenesis (By similarity). Acts as a transporter for tunicamycin, an inhibitor of asparagine-linked glycosylation. In placenta, acts as a receptor for ERVFRD- 1/syncytin-2 and is required for trophoblast fusion (PubMed:18988732).

# MFSD2A Antibody (C-Terminus) - References

Clark H.F., et al. Genome Res. 13:2265-2270(2003). Ota T., et al. Nat. Genet. 36:40-45(2004). Yamada S., et al. Oncogene 23:5901-5911(2004). Wan D., et al. Proc. Natl. Acad. Sci. U.S.A. 101:15724-15729(2004). Otsuki T., et al. DNA Res. 12:117-126(2005).