SANTA CRUZ BIOTECHNOLOGY, INC.

MFSD2 (N-12): sc-163084

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The Power to Question

BACKGROUND

MFSD2 (major facilitator superfamily domain containing 2), also known as MFSD2A, is a 543 amino acid multi-pass membrane protein of the endoplasmic reticulum that is involved in β-adrenergic signaling during thermogenesis. Existing as three alternatively spliced isoforms, MFSD2 plays a role in G_1 regulation and is encoded by a gene that maps to human chromosome 1p34.2. Human chromosome 1 spans 260 million base pairs, contains over 3,000 genes, comprises nearly 8% of the human genome and houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome.

REFERENCES

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2. Lau, E.K., et al. 1999. Two novel polymorphic sequences in the glucocerebrosidase gene region enhance mutational screening and founder effect studies of patients with Gaucher disease. Hum. Genet. 104: 293-300.
3. Plasilova, M., et al. 2004. Exclusion of an extracolonic disease modifier locus on chromosome 1p33-36 in a large Swiss familial adenomatous polyposis kindred. Eur. J. Hum. Genet. 12: 365-371.
4. Oliveira, S.A., et al. 2005. Identification of risk and age-at-onset genes on chromosome 1p in Parkinson disease. Am. J. Hum. Genet. 77: 252-264.
5. Angers, M., et al. 2008. Mfsd2a encodes a novel major facilitator superfamily domain-containing protein highly induced in brown adipose tissue during fasting and adaptive thermogenesis. Biochem. J. 416: 347-355.
6. Yurov, Y.B., et al. 2008. The schizophrenia brain exhibits low-level aneuploidy involving chromosome 1. Schizophr. Res. 98: 139-147.
7. Yokoi, T., et al. 2009. Analysis of the vitreous membrane in a case of type 1 Stickler syndrome. Graefes Arch. Clin. Exp. Ophthalmol. 247: 715-718.
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CHROMOSOMAL LOCATION

Genetic locus: MFSD2A (human) mapping to 1p34.2; Mfsd2a (mouse) mapping to 4 D2.2.

SOURCE

MFSD2 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MFSD2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-163084 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MFSD2 (N-12) is recommended for detection of MFSD2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other MFSD family members.

Suitable for use as control antibody for MFSD2 siRNA (h): sc-78732, MFSD2 siRNA (m): sc-149407, MFSD2 shRNA Plasmid (h): sc-78732-SH, MFSD2 shRNA Plasmid (m): sc-149407-SH, MFSD2 shRNA (h) Lentiviral Particles: sc-78732-V and MFSD2 shRNA (m) Lentiviral Particles: sc-149407-V.

Molecular Weight of MFSD2 isoforms 1/2/3: 60/59/50 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.