

ITM2B (C-8): sc-374362

BACKGROUND

The type II integral membrane (ITM2) protein family consists of three members: ITM2A (also designated E25), ITM2B and ITM2C. ITM2A expression is high in osteogenic and lymphoid tissues, while both ITM2B and ITM2C are expressed in brain. ITM2B is a 266 amino acid protein that contains a potential N-glycosylation site, a potential single transmembrane-spanning domain between amino acids 52 and 74 and an extracellular C-terminal domain. Mutations in the ITM2B gene can lead to familial British dementia (FBD), an autosomal dominant disease with an onset around the fifth decade of life that is characterized by progressive dementia, spasticity and cerebellar ataxia. Familial Danish dementia (FDD), also designated hereditary ophthalmic-oto-encephalica, is also associated with mutations in the ITM2B gene. FDD is an autosomal dominant disorder characterized by cataracts, deafness, progressive ataxia and dementia.

CHROMOSOMAL LOCATION

Genetic locus: ITM2B (human) mapping to 13q14.2; Itm2b (mouse) mapping to 14 D3.

SOURCE

ITM2B (C-8) is a mouse monoclonal antibody raised against amino acids 1-54 mapping at the N-terminus of ITM2B of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ITM2B (C-8) is available conjugated to agarose (sc-374362 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374362 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374362 PE), fluorescein (sc-374362 FITC), Alexa Fluor® 488 (sc-374362 AF488), Alexa Fluor® 546 (sc-374362 AF546), Alexa Fluor® 594 (sc-374362 AF594) or Alexa Fluor® 647 (sc-374362 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374362 AF680) or Alexa Fluor® 790 (sc-374362 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

ITM2B (C-8) is recommended for detection of ITM2B of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ITM2B siRNA (h): sc-60869, ITM2B siRNA (m): sc-60870, ITM2B shRNA Plasmid (h): sc-60869-SH, ITM2B shRNA Plasmid (m): sc-60870-SH, ITM2B shRNA (h) Lentiviral Particles: sc-60869-V and ITM2B shRNA (m) Lentiviral Particles: sc-60870-V.

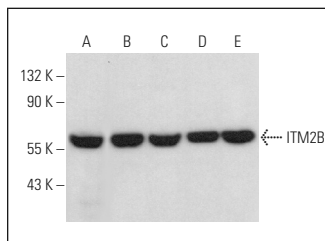
Molecular Weight of ITM2B: 44 kDa.

Positive Controls: U-251-MG whole cell lysate: sc-364176, RAW 264.7 whole cell lysate: sc-2211 or EOC 20 whole cell lysate: sc-364187.

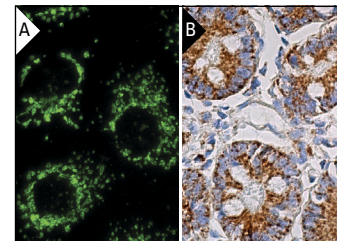
STORAGE

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

DATA



ITM2B (C-8): sc-374362. Western blot analysis of ITM2B expression in U-251-MG (A), M1 (B), RAW 264.7 (C), EOC 20 (D) and KNRK (E) whole cell lysates.



ITM2B (C-8): sc-374362. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic vesicles localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Martins, F., et al. 2016. BRI2 and BRI3 are functionally distinct phosphoproteins. *Cell. Signal.* 28: 130-144.
- Giannoccaro, M.P., et al. 2018. The first historically reported Italian family with FTD/ALS teaches a lesson on C9orf72 RE: clinical heterogeneity and oligogenic inheritance. *J. Alzheimers Dis.* 62: 687-697.
- Martins, F., et al. 2018. Identification and characterization of the BRI2 interactome in the brain. *Sci. Rep.* 8: 3548.
- Yasukawa, T., et al. 2020. NRBP1-containing CRL2/CRL4A regulates Amyloid β production by targeting BRI2 and BRI3 for degradation. *Cell Rep.* 30: 3478-3491.e6.
- Wohlschlegel, J., et al. 2021. First identification of ITM2B interactome in the human retina. *Sci. Rep.* 11: 17210.
- Fernandez, A., et al. 2023. Lack of ApoE inhibits ADan amyloidosis in a mouse model of Familial Danish dementia. *J. Biol. Chem.* 299: 102751.

RESEARCH USE

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

PROTOCOLS

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

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