

# ITM2B (E-11): sc-373874

## 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), and 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.

## REFERENCES

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- Ghiso, J.A., et al. 2001. Systemic amyloid deposits in familial British dementia. *J. Biol. Chem.* 276: 43909-43914.
- El-Agnaf, O., et al. 2004. Properties of neurotoxic peptides related to the Bri gene. *Protein Pept. Lett.* 11: 207-212.
- Matsuda, S., et al. 2005. The familial dementia BRI2 gene binds the Alzheimer gene Amyloid- $\beta$  precursor protein and inhibits Amyloid- $\beta$  production. *J. Biol. Chem.* 280: 28912-28916.
- Zirn, B., et al. 2005. All-*trans* retinoic acid treatment of Wilms tumor cells reverses expression of genes associated with high risk and relapse *in vivo*. *Oncogene* 24: 5246-5251.
- Morelli, L., et al. 2005. Insulin-degrading enzyme degrades amyloid peptides associated with British and Danish familial dementia. *Biochem. Biophys. Res. Commun.* 332: 808-816.

## CHROMOSOMAL LOCATION

Genetic locus: ITM2B (human) mapping to 13q14.2; *Ihm2b* (mouse) mapping to 14 D3.

## SOURCE

ITM2B (E-11) 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  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

ITM2B (E-11) 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  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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).

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.

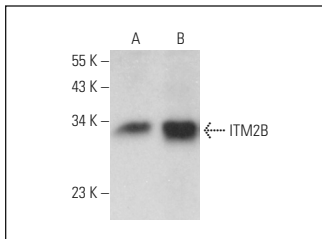
Molecular Weight of ITM2B: 44 kDa.

Positive Controls: ITM2B (h): 293 Lysate: sc-112200, 3T3-L1 cell lysate: sc-2243 or C3H/10T1/2 cell lysate: sc-3801.

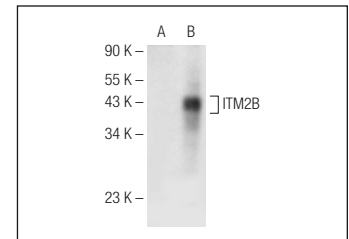
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



ITM2B (E-11): sc-373874. Western blot analysis of ITM2B expression in 3T3-L1 (A) and C3H/10T1/2 (B) whole cell lysates.



ITM2B (E-11): sc-373874. Western blot analysis of ITM2B expression in non-transfected: sc-110760 (A) and human ITM2B transfected: sc-112200 (B) 293 whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.