

# ITM2B (N-20): sc-50026

## 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 ophthalmoto-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

- Ernst, B., et al. 1970. Luria testing in demented patients. *Acta Neurol. Scand.* 43: 97-98.
- Vidal, R., et al. 1999. A stop-codon mutation in the BRI1 gene associated with familial British dementia. *Nature* 399: 776-781.
- 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  $\beta$ -Amyloid precursor protein and inhibits  $\beta$ -Amyloid 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; Itm2b (mouse) mapping to 14 D3.

## SOURCE

ITM2B (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of ITM2B of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-50026 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ITM2B (N-20) is recommended for detection of ITM2B (Integral membrane protein 2B) of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

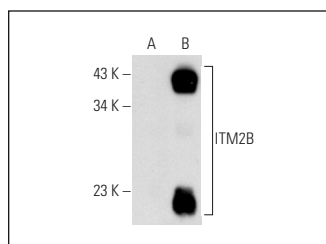
ITM2B (N-20) is also recommended for detection of ITM2B (Integral membrane protein 2B) in additional species, including equine and porcine.

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.

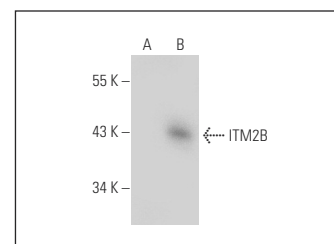
Molecular Weight of ITM2B: 44 kDa.

Positive Controls: ITM2B (m2): 293T Lysate: sc-121141 or ITM2B (h): 293 Lysate: sc-112200.

## DATA



ITM2B (N-20): sc-50026. Western blot analysis of ITM2B expression in non-transfected: sc-117752 (A) and mouse ITM2B transfected: sc-121141 (B) 293T whole cell lysates.



ITM2B (N-20): sc-50026. Western blot analysis of ITM2B expression in non-transfected: sc-110760 (A) and human ITM2B transfected: sc-112200 (B) 293 whole cell lysates.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **ITM2B (C-8): sc-374362** or **ITM2B (H-11): sc-374214**, our highly recommended monoclonal alternatives to ITM2B (N-20).