

ITM2B (h): 293 Lysate: sc-112200

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-encephalopathy, 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., Dalby, M.A. and Dalby, A. 1970. Luria testing in demented patients. *Acta Neurol. Scand.* 46: 97-98.
- Vidal, R., Frangione, B., Rostagno, A., Mead, S., Révész, T., Plant, G. and Ghiso, J. 1999. A stop-codon mutation in the BRI gene associated with familial British dementia. *Nature* 399: 776-781.
- Ghiso, J.A., Holton, J., Miravalle, L., Calero, M., Lashley, T., Vidal, R., Houlden, H., Wood, N., Neubert, T.A., Rostagno, A., Plant, G., Revesz, T. and Frangione, B. 2001. Systemic amyloid deposits in familial British dementia. *J. Biol. Chem.* 276: 43909-43914.
- El-Agnaf, O., Gibson, G., Lee, M., Wright, A. and Austen, B.M. 2004. Properties of neurotoxic peptides related to the Bri gene. *Protein Pept. Lett.* 11: 207-212.
- Matsuda, S., Giliberto, L., Matsuda, Y., Davies, P., McGowan, E., Pickford, F., Ghiso, J., Frangione, B. and D'Adamio, L. 2005. The familial dementia BRI2 gene binds the Alzheimer gene β -Amyloid precursor protein and inhibits β -Amyloid production. *J. Biol. Chem.* 280: 28912-28916.
- Zirn, B., Samans, B., Spangenberg, C., Graf, N., Eilers, M. and Gessler, M. 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., Llovera, R.E., Alonso, L.G., Frangione, B., de Prat-Gay, G., Ghiso, J. and Castaño, E.M. 2005. Insulin-degrading enzyme degrades amyloid peptides associated with British and Danish familial dementia. *Biochem. Biophys. Res. Commun.* 332: 808-816.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: ITM2B (human) mapping to 13q14.2.

PRODUCT

ITM2B (h): 293 Lysate represents a lysate of human ITM2B transfected 293 cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

ITM2B (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive ITM2B antibodies. Recommended use: 10-20 μ l per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

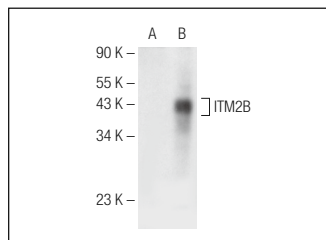
ITM2B (E-11): sc-373874 is recommended as a positive control antibody for Western Blot analysis of enhanced human ITM2B expression in ITM2B transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



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.