

ITM2C (E-16): sc-161747

BACKGROUND

The type II integral membrane (ITM2) protein family consists of three members: ITM2A (also designated E25), ITM2B and ITM2C. ITM2C (integral membrane protein 2C), also known as CT-BRI3 or hucep-14, is a 267 amino acid single-pass type II membrane protein that belongs to the ITM2 family. Containing one BRICHOS domain, ITM2C is expressed almost exclusively in brain. ITM2C interacts with APP by restricting its access to α and β secretase, and also interacts directly with BACE1 and SCG10. ITM2C may negatively regulate the production of β amyloid, and may also play a role TNF-induced cell death. Existing as three alternatively spliced isoforms, the gene encoding ITM2C maps to human chromosome 2q37.1 and mouse chromosome 1 C5.

REFERENCES

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- Vidal, R., et al. 2001. Sequence, genomic structure and tissue expression of Human BRI3, a member of the BRI gene family. *Gene* 266: 95-102.
- Choi, S.C., et al. 2001. Cloning and characterization of a type II integral transmembrane protein gene, *Itm2c*, that is highly expressed in the mouse brain. *Mol. Cells* 12: 391-397.
- Van den Plas, D. and Merregaert, J. 2004. *In vitro* studies on *Itm2a* reveal its involvement in early stages of the chondrogenic differentiation pathway. *Biol. Cell* 96: 463-470.
- Van den Plas, D. and Merregaert, J. 2004. Constitutive overexpression of the integral membrane protein *Itm2a* enhances myogenic differentiation of C2C12 cells. *Cell Biol. Int.* 28: 199-207.
- Rengaraj, D., et al. 2007. Expression and regulation of type II integral membrane protein family members in mouse male reproductive tissues. *Endocrine* 31: 193-201.
- Martin, L., et al. 2009. Substrate requirements for SPPL2b-dependent regulated intramembrane proteolysis. *J. Biol. Chem.* 284: 5662-5670.

CHROMOSOMAL LOCATION

Genetic locus: ITM2C (human) mapping to 2q37.1; *Itm2c* (mouse) mapping to 1 C5.

SOURCE

ITM2C (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ITM2C of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-161747 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ITM2C (E-16) is recommended for detection of ITM2C of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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); non cross-reactive with ITM2A or ITM2B.

ITM2C (E-16) is also recommended for detection of ITM2C in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ITM2C siRNA (h): sc-94875, ITM2C siRNA (m): sc-146311, ITM2C shRNA Plasmid (h): sc-94875-SH, ITM2C shRNA Plasmid (m): sc-146311-SH, ITM2C shRNA (h) Lentiviral Particles: sc-94875-V and ITM2C shRNA (m) Lentiviral Particles: sc-146311-V.

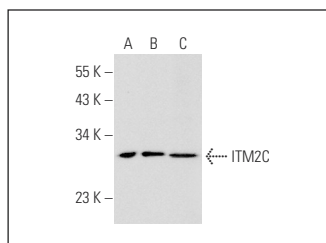
Molecular Weight of ITM2C isoforms 1/2/3: 30/25/26 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or mouse liver extract: sc-2256.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



ITM2C (E-16): sc-161747. Western blot analysis of ITM2C expression in HeLa (A) and K-562 (B) whole cell lysates and mouse liver tissue extract (C).

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.