

TUSC5 (B-4): sc-377025

BACKGROUND

TUSC5 (tumor suppressor candidate 5), also known as protein located at 17p13.3, LOST1 or IFITMD3 (interferon-induced transmembrane domain-containing protein D3), is a 177 amino acid multi-pass membrane protein that belongs to the CD225 family. Thought to play a role in fat metabolism, TUSC5 is highly expressed in mammary gland, heart, smooth muscle, skeletal muscle and stomach, with lower levels found in lung and brain. The gene encoding TUSC5 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, and is linked to predisposition of cancers of the ovary, colon, prostate gland and fallopian tubes.

REFERENCES

1. Hall, J.M., et al. 1992. Closing in on a breast cancer gene on chromosome 17q. *Am. J. Hum. Genet.* 50: 1235-1242.
2. Evans, S.C. and Lozano, G. 1997. The Li-Fraumeni syndrome: an inherited susceptibility to cancer. *Mol. Med. Today* 3: 390-395.
3. Soussi, T., et al. 2000. p53 website and analysis of p53 gene mutations in human cancer: forging a link between epidemiology and carcinogenesis. *Hum. Mutat.* 15: 105-113.
4. Piura, B., et al. 2001. Three primary malignancies related to BRCA mutation successively occurring in a BRCA1 185delAG mutation carrier. *Eur. J. Obstet. Gynecol. Reprod. Biol.* 97: 241-244.

CHROMOSOMAL LOCATION

Genetic locus: TUSC5 (human) mapping to 17p13.3; Tusc5 (mouse) mapping to 11 B5.

SOURCE

TUSC5 (B-4) is a mouse monoclonal antibody raised against amino acids 1-110 mapping at the N-terminus of TUSC5 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TUSC5 (B-4) is available conjugated to agarose (sc-377025 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377025 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377025 PE), fluorescein (sc-377025 FITC), Alexa Fluor® 488 (sc-377025 AF488), Alexa Fluor® 546 (sc-377025 AF546), Alexa Fluor® 594 (sc-377025 AF594) or Alexa Fluor® 647 (sc-377025 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377025 AF680) or Alexa Fluor® 790 (sc-377025 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

TUSC5 (B-4) is recommended for detection of TUSC5 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TUSC5 siRNA (h): sc-93933, TUSC5 siRNA (m): sc-154809, TUSC5 shRNA Plasmid (h): sc-93933-SH, TUSC5 shRNA Plasmid (m): sc-154809-SH, TUSC5 shRNA (h) Lentiviral Particles: sc-93933-V and TUSC5 shRNA (m) Lentiviral Particles: sc-154809-V.

Molecular Weight of TUSC5: 19 kDa.

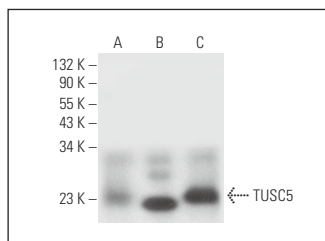
Positive Controls: TUSC5 (h): 293T Lysate: sc-112682, human heart extract: sc-363763 or human skeletal muscle extract: sc-363776.

RECOMMENDED SUPPORT REAGENTS

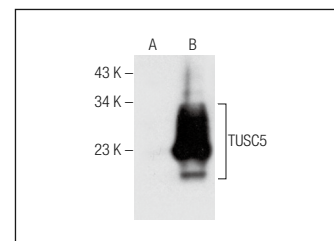
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



TUSC5 (B-4): sc-377025. Western blot analysis of TUSC5 expression in human heart (A), human skeletal muscle (B) and human stomach (C) tissue extracts.



TUSC5 (B-4): sc-377025. Western blot analysis of TUSC5 expression in non-transfected: sc-117752 (A) and human TUSC5 transfected: sc-112682 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. D'Souza, S.P., et al. 2022. Retinal patterns and the cellular repertoire of neuropsin (Opn5) retinal ganglion cells. *J. Comp. Neurol.* 530: 1247-1262.
2. Diaz-Vegas, A., et al. 2023. A high-content endogenous GLUT4 trafficking assay reveals new aspects of adipocyte biology. *Life Sci. Alliance* 6: e202201585.

RESEARCH USE

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

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