

# TUSC5 (C-5): sc-514114



The Power to Question

## 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

- Hall, J.M., et al. 1992. Closing in on a breast cancer gene on chromosome 17q. *Am. J. Hum. Genet.* 50: 1235-1242.
- Evans, S.C. and Lozano, G. 1997. The Li-Fraumeni syndrome: an inherited susceptibility to cancer. *Mol. Med. Today* 3: 390-395.
- 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.
- 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.
- Minamoto, T., et al. 2001. Distinct pattern of p53 phosphorylation in human tumors. *Oncogene* 20: 3341-3347.
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- Koide, H., et al. 2007. Tumor suppressor candidate 5 (TUSC5) is expressed in brown adipocytes. *Biochem. Biophys. Res. Commun.* 360: 139-145.
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## CHROMOSOMAL LOCATION

Genetic locus: TUSC5 (human) mapping to 17p13.3.

## SOURCE

TUSC5 (C-5) is a mouse monoclonal antibody raised against amino acids 1-102 mapping at the N-terminus of TUSC5 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

TUSC5 (C-5) is recommended for detection of TUSC5 of 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 shRNA Plasmid (h): sc-93933-SH and TUSC5 shRNA (h) Lentiviral Particles: sc-93933-V.

Molecular Weight of TUSC5: 19 kDa.

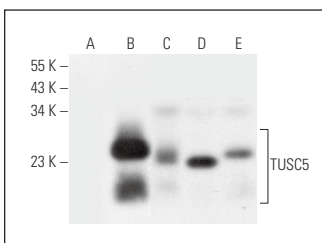
Positive Controls: TUSC5 (h): 293T Lysate: sc-112682, human skeletal muscle extract: sc-363776 or human stomach extract: sc-363780.

## RECOMMENDED SUPPORT REAGENTS

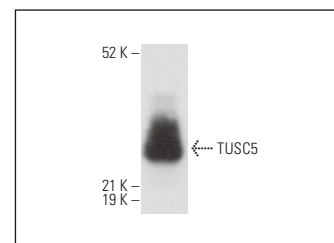
To ensure optimal results, the following support reagents are recommended:

- 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.
- Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- 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 (C-5): sc-514114. Western blot analysis of TUSC5 expression in non-transfected 293T: sc-117752 (A), human TUSC5 transfected 293T: sc-112682 (B) whole cell lysates and human heart (C), human skeletal muscle (D) and human stomach (E) tissue extracts.



TUSC5 (C-5): sc-514114. Western blot analysis of TUSC5 expression in human adipose tissue extract.

## 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) for detailed protocols and support products.