

TMEM102 (F-11): sc-398468

BACKGROUND

TMEM102 is a 508 amino acid encoded by a gene that maps to human chromosome 17. Chromosome 17 makes up over 2.5% of the human genome with about 81 million bases encoding over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. 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, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes. Chromosome 17 is also linked to neurofibromatosis, a condition characterized by neural and epidermal lesions, and dysregulated Schwann cell growth. Alexander disease, Birt-Hogg-Dube syndrome and Canavan disease are also associated with chromosome 17.

REFERENCES

1. Welsch, M.J., et al. 2005. Birt-Hogg-Dube syndrome. *Int. J. Dermatol.* 44: 668-673.
2. Nusbaum, R., et al. 2006-2007. Susceptibility to breast cancer: hereditary syndromes and low penetrance genes. *Breast Dis.* 27: 21-50.
3. Al-Dibashi, O.Y., et al. 2007. Quantification of N-acetylaspartic acid in urine by LC-MS/MS for the diagnosis of Canavan disease. *J. Inher. Metab. Dis.* 30: 612.
4. Dann, R.B., et al. 2007. Strategies for ovarian cancer prevention. *Obstet. Gynecol. Clin. North Am.* 34: 667-686.
5. Farrell, C.J. and Plotkin, S.R. 2007. Genetic causes of brain tumors: neurofibromatosis, tuberous sclerosis, von Hippel-Lindau, and other syndromes. *Neurol. Clin.* 25: 925-946.

CHROMOSOMAL LOCATION

Genetic locus: TMEM102 (human) mapping to 17p13.1.

SOURCE

TMEM102 (F-11) is a mouse monoclonal antibody raised against amino acids 421-498 mapping near the C-terminus of TMEM102 of human 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.

TMEM102 (F-11) is available conjugated to agarose (sc-398468 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398468 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398468 PE), fluorescein (sc-398468 FITC), Alexa Fluor® 488 (sc-398468 AF488), Alexa Fluor® 546 (sc-398468 AF546), Alexa Fluor® 594 (sc-398468 AF594) or Alexa Fluor® 647 (sc-398468 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398468 AF680) or Alexa Fluor® 790 (sc-398468 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

TMEM102 (F-11) is recommended for detection of TMEM102 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 TMEM102 siRNA (h): sc-93830, TMEM102 shRNA Plasmid (h): sc-93830-SH and TMEM102 shRNA (h) Lentiviral Particles: sc-93830-V.

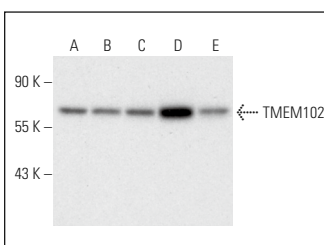
Molecular Weight of TMEM102: 54 kDa.

Positive Controls: T98G cell lysate: sc-2294, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

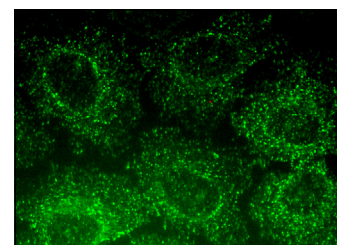
RECOMMENDED SUPPORT REAGENTS

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



TMEM102 (F-11): sc-398468. Western blot analysis of TMEM102 expression in T98G (A), IMR-32 (B), HeLa (C), Hep G2 (D) and NCI-H1299 (E) whole cell lysates.



TMEM102 (F-11): sc-398468. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic vesicle localization.

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 for detailed protocols and support products.