

TACC3 (D-2): sc-48368



The Power to Question

BACKGROUND

TACC1 (transforming acidic coiled coil gene 1) is one of three TACC family members, which are thought to be involved in breast tumorigenesis. TACC1 is located on 8p11 chromosomal region that is amplified in approximately 15% of all breast tumor samples. The short arm of chromosome 8 also contains FGFR1 whose expression is enhanced in most breast cancer tumors. TACC family members, TACC1, TACC2, and TACC3, map very closely to the corresponding FGFR1, FGFR2, FGFR3 genes on chromosomes 8, 10, and 4. Subsequently, since they are phylogenetically related, it is proposed that TACC and FGFR have similar roles in cell growth and differentiation. Also, TACC1 contains a conserved C-terminal region as in the *Drosophila* homolog, D-TACC. It has been shown that D-TACC is necessary for normal spindle function, and the mammalian TACC proteins appears to interact with centrosomes and microtubules in a similar manner.

REFERENCES

1. Dib, A., et al. 1995. Characterization of the region of the short arm of chromosome 8 amplified in breast carcinoma. *Oncogene* 10: 995-1001.
2. Yoshimura, N., et al. 1998. The expression and localization of fibroblast growth factor-1 (FGF-1) and FGF receptor-1 (FGFR-1) in human breast cancer. *Clin. Immunol. Immunopathol.* 89: 28-34.

CHROMOSOMAL LOCATION

Genetic locus: TACC3 (human) mapping to 4p16.3; Tacc3 (mouse) mapping to 5 B2.

SOURCE

TACC3 (D-2) is a mouse monoclonal antibody raised against amino acids 1-300 of TACC3 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.

APPLICATIONS

TACC3 (D-2) is recommended for detection of TACC3 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), immunohistochemistry (including paraffin-embedded sections) (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 TACC3 siRNA (h): sc-36602, TACC3 siRNA (m): sc-36603, TACC3 shRNA Plasmid (h): sc-36602-SH, TACC3 shRNA Plasmid (m): sc-36603-SH, TACC3 shRNA (h) Lentiviral Particles: sc-36602-V and TACC3 shRNA (m) Lentiviral Particles: sc-36603-V.

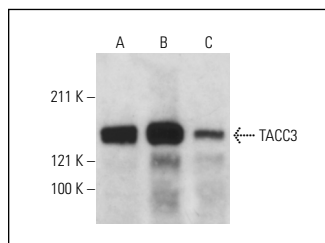
Molecular Weight of TACC3: 140 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or HL-60 whole cell lysate: sc-2209.

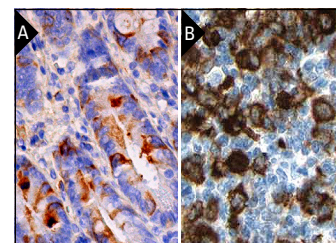
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



TACC3 (D-2): sc-48368. Western blot analysis of TACC3 expression in HeLa (A), Jurkat (B) and HL-60 (C) whole cell lysates.



TACC3 (D-2): sc-48368. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of subset of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic staining of follicle cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

1. Gómez-Baldó, L., et al. 2010. TACC3-TSC2 maintains nuclear envelope structure and controls cell division. *Cell Cycle* 9: 1143-1155.
2. Lin, C.H., et al. 2010. Clathrin heavy chain mediates TACC3 targeting to mitotic spindles to ensure spindle stability. *J. Cell Biol.* 189: 1097-1105.
3. Rio-Machin, A., et al. 2013. Downregulation of specific miRNAs in hyperdiploid multiple myeloma mimics the oncogenic effect of IgH translocations occurring in the non-hyperdiploid subtype. *Leukemia* 27: 925-931.
4. Thakur, H.C., et al. 2014. The centrosomal adaptor TACC3 and the microtubule polymerase chTOG interact via defined C-terminal subdomains in an Aurora-A kinase-independent manner. *J. Biol. Chem.* 289: 74-88.
5. Scott, N.E., et al. 2017. Interactome disassembly during apoptosis occurs independent of caspase cleavage. *Mol. Syst. Biol.* 13: 906.

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.