SANTA CRUZ BIOTECHNOLOGY, INC.

D54 (L-12): sc-85522

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The tumor protein D52 (TPD52) family consists of three members, TPD52, TPD52L1 (D53), and TPD52L2 (D54). These small coiled-coil motif bearing proteins interact in hetero- and homomeric fashion, and have been implicated in cell proliferation, apoptosis, and vesicle trafficking. The TPD52 gene maps to chromosome 8q12, and due to amplification, shows frequent overexpression in prostate and breast carcinomas. D54 is a 206 amino acid protein that is often co-expressed with TPD52 in the bone marrow of patients with ALL and AML, suggesting that it has the potential to play a role in malignancy. D54 interacts with MAL2, a member of the polarized machinery transport system that is required for transcytosis, a transporter pathway that is used to deliver membrane-bound cargo from perinuclear endosomes to the apical surface in a raft-dependent manner. There are three isoforms of D54 that are produced as a result of alternative splicing events.

REFERENCES

1. Nourse, C.R., et al. 1998. Cloning of a third member of the D52 gene family indicates alternative coding sequence usage in D52-like transcripts. Biochim. Biophys. Acta 1443: 155-168.
2. Byrne, J.A., et al. 1998. Identification of homo- and heteromeric interactions between members of the breast carcinoma-associated D52 protein family using the yeast two-hybrid system. Oncogene 16: 873-881.
3. Sathasivam, P., et al. 2001. The role of the coiled-coil motif in interactions mediated by TPD52. Biochem. Biophys. Res. Commun. 288: 56-61.
4. Wilson, S.H., et al. 2001. Identification of MAL2, a novel member of the mal proteolipid family, though interactions with TPD52-like proteins in the yeast two-hybrid system. Genomics 76: 81-88.
5. Boutros, R., et al. 2004. The tumor protein D52 family: many pieces, many puzzles. Biochem. Biophys. Res. Commun. 325: 1115-1121.
6. Rubin, M.A., et al. 2004. Overexpression, amplification, and androgen regulation of TPD52 in prostate cancer. Cancer 64: 3814-3822.
7. Tiacci, E., et al. 2005. Tumor protein D52 (TPD52): a novel B cell/plasma-cell molecule with unique expression pattern and Ca^{2+}-dependent association with Annexin VI. Blood 105: 2812-2820.

CHROMOSOMAL LOCATION

Genetic locus: TPD52L2 (human) mapping to 20q13.33; Tpd52l2 (mouse) mapping to 2 H4.

SOURCE

D54 (L-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of D54 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85522 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

D54 (L-12) is recommended for detection of D54 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 D54 siRNA (h): sc-77088, D54 siRNA (m): sc-142830, D54 shRNA Plasmid (h): sc-77088-SH, D54 shRNA Plasmid (m): sc-142830-SH, D54 shRNA (h) Lentiviral Particles: sc-77088-V and D54 shRNA (m) Lentiviral Particles: sc-142830-V.

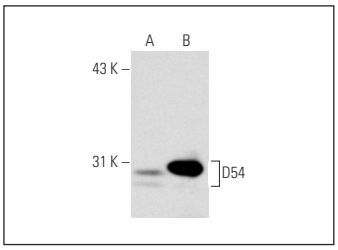
Molecular Weight of D54: 22 kDa.

Positive Controls: D54 (h2): 293T Lysate: sc-175126 or D54 (m2): 293T Lysate: sc-110149.

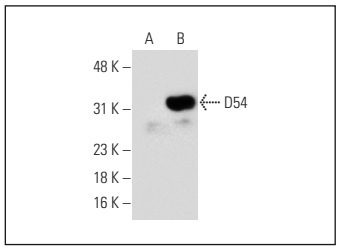
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



D54 (L-12): sc-85522. Western blot analysis of D54 expression in non-transfected: sc-117752 (**A**) and mouse D54 transfected: sc-110149 (**B**) 293T whole cell lysates.



D54 (L-12): sc-85522. Western blot analysis of D54 expression in non-transfected: sc-110760 (**A**) and human D54 transfected: sc-175126 (**B**) 293 whole cell lysates.

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 or our catalog for detailed protocols and support products.