

TRC8 (YB-16): sc-101115

BACKGROUND

TRC8 (translocation in renal carcinoma on chromosome 8), also known as RNF139 (RING finger protein 139), RCA1 or HRCA1 (hereditary renal cancer associated 1), is a multi-pass membrane protein that is predominantly expressed in testis, adrenal gland and placenta, and is expressed at lower levels in liver, skeletal muscle, pancreas, kidney, brain, heart and lung. Localizing to the endoplasmic reticulum (ER), TRC8 contains ten transmembrane segments, a sterol-sensing domain and one RING-type zinc finger, and may function as a ubiquitin ligase and signaling receptor. TRC8 physically interacts with VHL (Von Hippel Lindau disease tumor suppressor), and the inhibition of either of these proteins leads to the same ventral midline defect. Disruption of the TRC8 gene, caused by the 3;8 chromosomal translocation, is associated with hereditary renal cell carcinoma (RCC), suggesting that TRC8 is a potential tumor suppressor for RCC. Further supporting its role as a tumor suppressor, TRC8 mediates the induction of G₂/M phase arrest, increased apoptosis and decreased DNA synthesis.

REFERENCES

1. Boldog, F.L., et al. 1993. Positional cloning of the hereditary renal carcinoma 3;8 chromosome translocation breakpoint. *Proc. Natl. Acad. Sci. USA* 90: 8509-8513.
2. Gemmill, R.M., et al. 1998. The hereditary renal cell carcinoma 3;8 translocation fuses FHIT to a patched-related gene, TRC8. *Proc. Natl. Acad. Sci. USA* 95: 9572-9577.
3. Lorick, K.L., et al. 1999. RING fingers mediate ubiquitin-conjugating enzyme (E2)-dependent ubiquitination. *Proc. Natl. Acad. Sci. USA* 96: 11364-11369.
4. Gemmill, R.M., et al. 2002. The TRC8 hereditary kidney cancer gene suppresses growth and functions with VHL in a common pathway. *Oncogene* 21: 3507-3516.
5. Charytoniuk, D., et al. 2002. Sonic hedgehog signalling in the developing and adult brain. *J. Physiol. Paris* 96: 9-16.
6. Gemmill, R.M., et al. 2005. Growth suppression induced by the TRC8 hereditary kidney cancer gene is dependent upon JAB1/CNS5. *Oncogene* 24: 3503-3511.
7. Brauweiler, A., et al. 2007. RING-dependent tumor suppression and G₂/M arrest induced by the TRC8 hereditary kidney cancer gene. *Oncogene* 26: 2263-2271.

CHROMOSOMAL LOCATION

Genetic locus: RNF139 (human) mapping to 8q24.13.

SOURCE

TRC8 (YB-16) is a mouse monoclonal antibody raised against recombinant TRC8 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

TRC8 (YB-16) is recommended for detection of TRC8 of 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), 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 TRC8 siRNA (h): sc-63155, TRC8 shRNA Plasmid (h): sc-63155-SH and TRC8 shRNA (h) Lentiviral Particles: sc-63155-V.

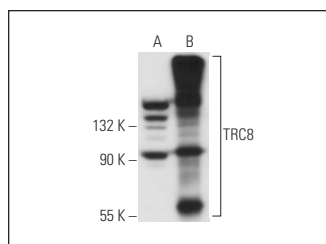
Molecular Weight of TRC8: 60 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or TRC8 (h): 293T Lysate: sc-116907.

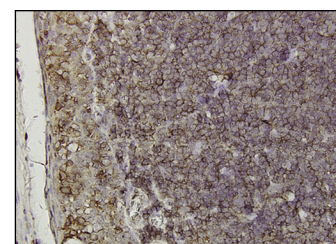
RECOMMENDED SUPPORT REAGENTS

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



TRC8 (YB-16): sc-101115. Western blot analysis of TRC8 expression in non-transfected: sc-117752 (A) and human TRC8 transfected: sc-116907 (B) 293T whole cell lysates.



TRC8 (YB-16): sc-101115. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human tonsil tissue showing membrane and cytoplasmic 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.