SANTA CRUZ BIOTECHNOLOGY, INC.

TR4 (95-P): sc-130409

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The human TR2 orphan receptor is a member if the steroid/thyroid hormone receptor superfamily that controls a variety of processes, including growth, differentiation and development. TR2 is known to bind to regulatory elements of the erythropoietin gene, the muscle-specific aldolase A gene and the CNTF-15 gene. In addition to TR2, a related orphan receptor, TR4 has been identified. This protein forms heterodimers with TR2, which are thought to be involved in neurogenesis and germ cell development. TR2 is known to be downregulated by both p53 and ionizing radiation, and it may play a role in linking p53 to members of the steroid receptor family.

REFERENCES

1. Chang, C., et al. 1994. Human and rat TR4 orphan receptors specify a subclass of the steroid receptor superfamily. Proc. Natl. Acad. Sci. USA 91: 6040-6044.
2. Lee, H.J., et al. 1996. Suppression of the human erythropoietin gene expression by the TR2 orphan receptor, a member of the steroid receptor superfamily. J. Biol. Chem. 271: 10405-10412.
3. Lin, D.L., et al. 1996. p53 is a mediator for radiation-repressed human TR2 orphan receptor expression in MCF-7 cells, a new pathway from tumor suppressor to member of the steroid receptor superfamily. J. Biol. Chem. 271: 14649-14652.
4. Chang, C., et al. 1997. Identification of the human Aldolase A gene as the first induced target for the TR2 orphan receptor, a member of the steroid hormone receptor superfamily. Biochem. Biophys. Res. Commun. 235: 205-211.
5. Young, W.J., et al. 1998. A bidirectional regulation between the TR2/TR4 orphan receptors (TR2/TR4) and the ciliary neurotrophic factor (CNTF) signaling pathway. J. Biol. Chem. 273: 20877-20885.
6. Lee, C.H., et al. 1998. A novel nuclear receptor heterodimerization pathway mediated by orphan receptors TR2 and TR4. J. Biol. Chem. 273: 25209-25215.

CHROMOSOMAL LOCATION

Genetic locus: NR2C2 (human) mapping to 3p25.1; Nr2c2 (mouse) mapping to 6 D1.

SOURCE

TR4 (95-P) is a mouse monoclonal antibody raised against recombinant TR4 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

TR4 (95-P) is recommended for detection of TR4 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for TR4 siRNA (h): sc-38894, TR4 siRNA (m): sc-38895, TR4 shRNA Plasmid (h): sc-38894-SH, TR4 shRNA Plasmid (m): sc-38895-SH, TR4 shRNA (h) Lentiviral Particles: sc-38894-V and TR4 shRNA (m) Lentiviral Particles: sc-38895-V.

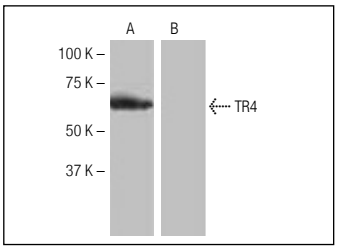
Molecular Weight of TR4: 66 kDa.

Positive Controls: 3T3-L1 cell lysate: sc-2243, F9 cell lysate: sc-2245 or human TR4 transfected 293T whole cell lysate.

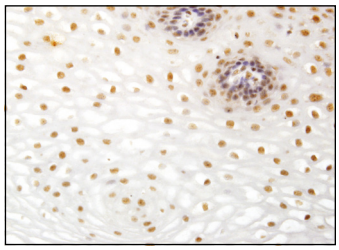
RECOMMENDED SUPPORT REAGENTS

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, 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 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



TR4 (95-P): sc-130409. Western blot analysis of TR4 expression in human TR4 transfected (**A**) and non-transfected (**B**) 293T whole cell lysates.



TR4 (95-P): sc-130409. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human esophagus tissue showing nuclear localization.

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.