

TR4 (D-5): sc-365895

BACKGROUND

The human TR2 orphan receptor is a member of 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.

CHROMOSOMAL LOCATION

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

SOURCE

TR4 (D-5) is a mouse monoclonal antibody raised against amino acids 41-76 of TR4 of mouse 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.

TR4 (D-5) is available conjugated to agarose (sc-365895 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365895 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365895 PE), fluorescein (sc-365895 FITC), Alexa Fluor® 488 (sc-365895 AF488), Alexa Fluor® 546 (sc-365895 AF546), Alexa Fluor® 594 (sc-365895 AF594) or Alexa Fluor® 647 (sc-365895 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365895 AF680) or Alexa Fluor® 790 (sc-365895 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

TR4 (D-5) is recommended for detection of TR4 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

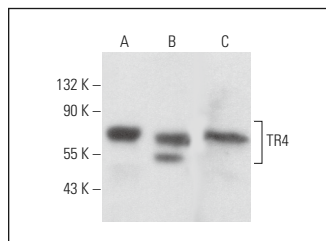
Molecular Weight of TR4: 66 kDa.

Positive Controls: F9 cell lysate: sc-2245, NIH/3T3 whole cell lysate: sc-2210 or Sol8 cell lysate: sc-2249.

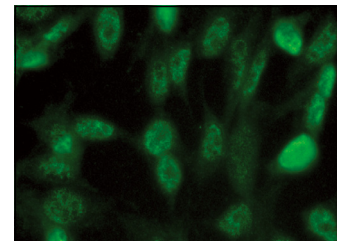
RECOMMENDED SUPPORT REAGENTS

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



TR4 (D-5): sc-365895. Western blot analysis of TR4 expression in NIH/3T3 (A), Sol8 (B) and F9 (C) whole cell lysates.



TR4 (D-5): sc-365895. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Chen, D., et al. 2020. Targeting the radiation-induced TR4 nuclear receptor-mediated QKI/circZEB1/miR-141-3p/ZEB1 signaling increases prostate cancer radiosensitivity. *Cancer Lett.* 495: 100-111.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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