SANTA CRUZ BIOTECHNOLOGY, INC.

TR2 (M-85): sc-9087

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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, designated TR4, has been identified. TR4 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.

CHROMOSOMAL LOCATION

Genetic locus: NR2C1 (human) mapping to 12q22; Nr2c1 (mouse) mapping to 10 C2.

SOURCE

TR2 (M-85) is a rabbit polyclonal antibody raised against amino acids 25-110 of TR2 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

TR2 (M-85) is recommended for detection of TR2 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), 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); may cross-react with TR4.

Suitable for use as control antibody for TR2 siRNA (h): sc-38892, TR2 siRNA (m): sc-38893, TR2 shRNA Plasmid (h): sc-38892-SH, TR2 shRNA Plasmid (m): sc-38893-SH, TR2 shRNA (h) Lentiviral Particles: sc-38892-V and TR2 shRNA (m) Lentiviral Particles: sc-38893-V.

Molecular Weight of TR2: 67 kDa.

Positive Controls: 3T3-L1 cell lysate: sc-2243 or HeLa whole cell lysate: sc-2200.

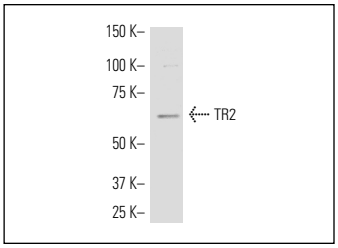
STORAGE

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

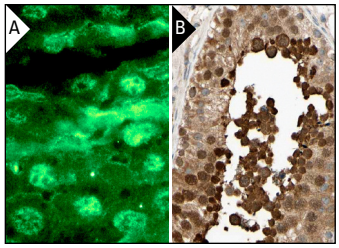
RESEARCH USE

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

DATA



TR2 (M-85): sc-9087. Western blot analysis of TR2 expression in 3T3-L1 whole cell lysate.



TR2 (M-85): sc-9087. Immunofluorescence staining of normal mouse liver frozen section showing nuclear staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in ductus seminiferus magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Tanabe, O., et al. 2002. An embryonic/fetal β-type globin gene repressor contains a nuclear receptor TR2/TR4 heterodimer. EMBO J. 21: 3434-3442.
2. Park, S.W., et al. 2007. SUMOylation of TR2 orphan receptor involves PML and fine-tunes Oct-4 expression in stem cells. Nat. Struct. Mol. Biol. 14: 68-75.
3. Gupta, P., et al. 2008. Retinoic acid-stimulated sequential phosphorylation, PML recruitment, and SUMOylation of nuclear receptor TR2 to suppress Oct-4 expression. Proc. Natl. Acad. Sci. USA 105: 11424-11429.
4. Shyr, C.R., et al. 2009. Roles of testicular orphan nuclear receptors 2 and 4 in early embryonic development and embryonic stem cells. Endocrinology 150: 2454-2462.
5. Chuang, Y.S., et al. 2011. Promyelocytic leukemia protein in retinoic acid-induced chromatin remodeling of Oct4 gene promoter. Stem Cells 29: 660-669.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.