

TR α 1/ α 2 (948C3a): sc-130021

BACKGROUND

Thyroid hormone nuclear receptors (TRs) are ligand-dependent transcription factors which regulate and control many metabolic and developmental processes. There are two genes encoding TRs identified to date, TR α and TR β . TRs bind to thyroid hormone response elements (TREs) with half-site binding motifs in the orientation of palindromes, direct repeats or inverted palindromes. The affinities of binding are both variable and influenced differentially by 3,5,3'-triiodo-L-thyronine (T3). Transcriptional regulation by TRs is also modulated by heterodimerization with TR nuclear accessory proteins, the most extensively characterized of which are the retinoid X receptors (RXR α , RXR β and RXR γ). The TR α isoform TR α 1 can display both a nuclear and undefined cytoplasmic location, and is the only TR that is imported into the mitochondrial matrix. TR α 2 is a C-terminal variant of TR α 1 that does not bind thyroid hormones (THs) and weakly binds DNA. TR α 2 acts as a dominant negative antagonist of TH signalling.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: THRA (human) mapping to 17q21.1; Thra (mouse) mapping to 11 D.

SOURCE

TR α 1/ α 2 (948C3a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of TR α 1 of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

APPLICATIONS

TR α 1/ α 2 (948C3a) is recommended for detection of TR α 1/ α 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

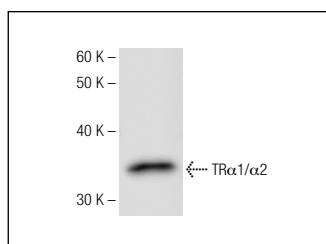
Suitable for use as control antibody for TR α siRNA (h): sc-36707, TR α siRNA (m): sc-36708, TR α shRNA Plasmid (h): sc-36707-SH, TR α shRNA Plasmid (m): sc-36708-SH, TR α shRNA (h) Lentiviral Particles: sc-36707-V and TR α shRNA (m) Lentiviral Particles: sc-36708-V.

Molecular Weight of TR α 1: 47 kDa.

Molecular Weight of TR α 2: 55 kDa.

Positive Controls: C32 whole cell lysate: sc-2205, C32 nuclear extract: sc-2136 or Hep G2 nuclear extract: sc-364819.

DATA



TR α 1/ α 2 (948C3a): sc-130021. Western blot analysis of human recombinant TR α 1/ α 2 fusion protein.

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 for detailed protocols and support products.