

DIO1 (C-17): sc-69381

BACKGROUND

DIO1 (deiodinase, iodothyronine, type I), also known as TXD11, ITD11 or 5DI, is a 249 amino acid single-pass membrane protein that localizes to the endoplasmic reticulum and belongs to the iodothyronine deiodinase family. Expressed as nine alternatively spliced isoforms, DIO1 functions as a thiol-dependent propylthiouracil-sensitive oxidoreductase that converts the prohormone thyroxine (T4) to bioactive 3,3',5-triiodothyronine (T3), thereby playing a role in thyroid hormone (TH) activation. Human DIO1 shares 88% sequence similarity with its rat counterpart, suggesting a conserved role between species. The gene encoding DIO1 maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome.

CHROMOSOMAL LOCATION

Genetic locus: DIO1 (human) mapping to 1p32.3; Dio1 (mouse) mapping to 4 C7.

SOURCE

DIO1 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of DIO1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-69381 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

DIO1 (C-17) is recommended for detection of DIO1 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

DIO1 (C-17) is also recommended for detection of DIO1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for DIO1 siRNA (h): sc-77146, DIO1 siRNA (m): sc-77147, DIO1 shRNA Plasmid (h): sc-77146-SH, DIO1 shRNA Plasmid (m): sc-77147-SH, DIO1 shRNA (h) Lentiviral Particles: sc-77146-V and DIO1 shRNA (m) Lentiviral Particles: sc-77147-V.

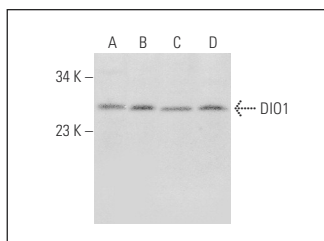
Molecular Weight of DIO1: 28 kDa.

Positive Controls: A549 cell lysate: sc-2413, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



DIO1 (C-17): sc-69381. Western blot analysis of DIO1 expression in A549 (A), HeLa (B), Hep G2 (C) and Jurkat (D) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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

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Try **DIO1 (B-7): sc-515198**, our highly recommended monoclonal alternative to DIO1 (C-17).