

QTRTD1 (G-5): sc-393480

BACKGROUND

QTRTD1 (queuine tRNA-ribosyltransferase domain containing 1) is a 415 amino acid protein involved in tRNA modification and tRNA-queuosine biosynthesis. Localizing to cytoplasm, QTRTD1 also localizes to the mitochondrial outer membrane and associates with QTRT1 (queuine tRNA-ribosyltransferase domain containing 1) to form an active queuine tRNA-ribosyltransferase. At the wobble position of tRNAs with GUN anticodons, QTRTD1 exchanges queuine for guanine to form queuosine, a modified nucleoside. QTRTD1 is a member of the queuine tRNA-ribosyltransferase family, QTRTD1 subfamily and is encoded by a gene located on human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Marfan Syndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth Disease are a few of the numerous genetic diseases associated with chromosome 3.

REFERENCES

1. Collod, G., et al. 1994. A second locus for Marfan syndrome maps to chromosome 3p24.2-p25. *Nat. Genet.* 8: 264-268.
2. De Jonghe, P., et al. 1997. Mutilating neuropathic ulcerations in a chromosome 3q13-q22 linked Charcot-Marie-Tooth disease type 2B family. *J. Neurol. Neurosurg. Psychiatr.* 62: 570-573.
3. Maho, A., et al. 1999. Mapping of the CCXCR1, CX3CR1, CCBP2 and CCR9 genes to the CCR cluster within the 3p21.3 region of the human genome. *Cytogenet. Cell Genet.* 87: 265-268.
4. Robinson, P.N. and Godfrey, M. 2000. The molecular genetics of Marfan syndrome and related microfibrilopathies. *J. Med. Genet.* 37: 9-25.

CHROMOSOMAL LOCATION

Genetic locus: QTRTD1 (human) mapping to 3q13.31; Qtrtd1 (mouse) mapping to 16 B4.

SOURCE

QTRTD1 (G-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 189-210 within an internal region of QTRTD1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-393480 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

QTRTD1 (G-5) is recommended for detection of QTRTD1 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).

QTRTD1 (G-5) is also recommended for detection of QTRTD1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for QTRTD1 siRNA (h): sc-78408, QTRTD1 siRNA (m): sc-152617, QTRTD1 shRNA Plasmid (h): sc-78408-SH, QTRTD1 shRNA Plasmid (m): sc-152617-SH, QTRTD1 shRNA (h) Lentiviral Particles: sc-78408-V and QTRTD1 shRNA (m) Lentiviral Particles: sc-152617-V.

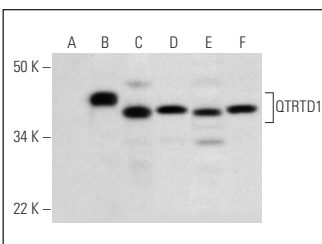
Molecular Weight of QTRTD1: 47 kDa.

Positive Controls: QTRTD1 (m2): 293T Lysate: sc-122874, U-937 cell lysate: sc-2239 or HL-60 whole cell lysate: sc-2209.

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



QTRTD1 (G-5): sc-393480. Western blot analysis of QTRTD1 expression in non-transfected 293T: sc-117752 (A), mouse QTRTD1 transfected 293T: sc-122874 (B), U-937 (C), HL-60 (D), A549 (E) and LNCaP (F) whole cell lysates.

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.