

TRNT1 (J-22): sc-134127



The Power to Question

BACKGROUND

TRNT1 (tRNA nucleotidyl transferase, CCA-adding, 1), also known as CCA1, MtCCA or CGI-47, is a 434 amino acid mitochondrial protein belonging to the tRNA nucleotidyltransferase/poly(A) polymerase family. Considered a CCA-adding enzyme, TRNT1 is essential for catalyzing the addition of the CCA terminus to the 3' end of tRNA precursors, a reaction which is a fundamental prerequisite for mature tRNAs to become aminoacylated and to participate in protein biosynthesis. Existing as three isoforms produced by alternative splicing events, TRNT1 binds manganese as a cofactor and is subject to homodimerization by disulfied linkage. TRNT1 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.

REFERENCES

1. Reichert, A.S., et al. 2001. A eubacterial origin for the human tRNA nucleotidyltransferase? *Biol. Chem.* 382: 1431-1438.
2. Nagaïke, T., et al. 2001. Identification and characterization of mammalian mitochondrial tRNA nucleotidyltransferases. *J. Biol. Chem.* 276: 40041-40049.

CHROMOSOMAL LOCATION

Genetic locus: TRNT1 (human) mapping to 3p26.3; Trnt1 (mouse) mapping to 6 E1.

SOURCE

TRNT1 (J-22) is a Protein A purified rabbit polyclonal antibody raised against synthetic TRNT1 peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

RESEARCH USE

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

APPLICATIONS

TRNT1 (J-22) is recommended for detection of TRNT1 of mouse 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).

Suitable for use as control antibody for TRNT1 siRNA (h): sc-78516, TRNT1 siRNA (m): sc-154687, TRNT1 shRNA Plasmid (h): sc-78516-SH, TRNT1 shRNA Plasmid (m): sc-154687-SH, TRNT1 shRNA (h) Lentiviral Particles: sc-78516-V and TRNT1 shRNA (m) Lentiviral Particles: sc-154687-V.

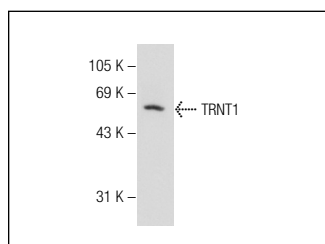
Molecular Weight of TRNT1: 50 kDa.

Positive Controls: TRNT1 (m): IMR-32 cell lysate: sc-2409 or human fetal brain tissue extract.

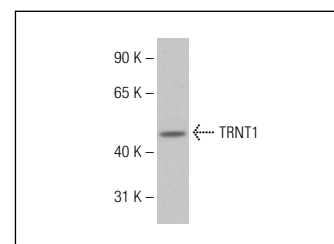
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



TRNT1 (J-22): sc-134127. Western blot analysis of TRNT1 expression in non-transfected 293T: sc-117752 (A), mouse TRNT1 transfected 293T: sc-124298 (B) and IMR-32 (C) whole cell lysates.



TRNT1 (J-22): sc-134127. Western blot analysis of TRNT1 expression in human fetal brain tissue extract.

STORAGE

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

PROTOCOLS

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



Try **TRNT1 (1G11): sc-517103**, our highly recommended monoclonal alternative to TRNT1 (J-22).