SANTA CRUZ BIOTECHNOLOGY, INC.

# TRM11 (E-14): sc-139098

## BACKGROUND

TRM11 (tRNA guanosine-2'-O-methyltransferase TRM11 homolog) is a 463 amino acid protein that belongs to the methyltransferase superfamily. TRM11 is believed to be the catalytic subunit of an S-adenosyl-L-methionine-dependent tRNA methyltransferase complex that mediates the methylation of the guanosine nucleotide at position 10 (m2G10) in tRNAs. The gene encoding TRM11 maps to a region on chromosome 6 that is shared by 7 other genes, which have been linked to diffuse panbronchiolitis. Chromosome 6 contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

## REFERENCES


1. Purushothaman, S.K., et al. 2005. Trm11p and Trm112p are both required for the formation of 2-methylguanosine at position 10 in yeast tRNA. Mol. Cell. Biol. 25: 4359-4370.
2. Heurgué-Hamard, V., et al. 2006. The zinc finger protein Ynr046w is plurifunctional and a component of the eRF1 methyltransferase in yeast. J. Biol. Chem. 281: 36140-36148.
3. Studte, P., et al. 2008. tRNA and protein methylase complexes mediate zymocin toxicity in yeast. Mol. Microbiol. 69: 1266-1277.
4. Okada, K., et al. 2009. Production of yeast (m2G10) methyltransferase (Trm11 and Trm112 complex) in a wheat germ cell-free translation system. Nucleic Acids Symp. Ser. 53: 303-304.
5. Towns, W.L., et al. 2011. Transfer RNA methytransferases and their corresponding modifications in budding yeast and humans: activities, predications, and potential roles in human health. DNA Cell Biol. 31: 434-454.
6. Lin, J.W., et al. 2011. The prognostic impact of O6-methylguanine DNA methyltransferase and epidermal growth factor receptor expressions on primary gliosarcoma: a clinicopathologic and immunohistochemical study of seven cases at a single institution. Indian J. Pathol. Microbiol. 54: 683-687.
7. Liger, D., et al. 2011. Mechanism of activation of methyltransferases involved in translation by the Trm112 "hub" protein. Nucleic Acids Res. 39: 6249-6259.
8. Menezes, S., et al. 2011. Formation of m2G6 in *Methanocaldococcus jannaschii* tRNA catalyzed by the novel methyltransferase Trm14. Nucleic Acids Res. 39: 7641-7655.


## CHROMOSOMAL LOCATION

Genetic locus: TRMT11 (human) mapping to 6q22.32; Trmt11 (mouse) mapping to 10 A4.

## SOURCE

TRM11 (E-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of TRM11 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-139098 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

TRM11 (E-14) is recommended for detection of TRM11 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TRM11 (E-14) is also recommended for detection of TRM11 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for TRM11 siRNA (h): sc-95500, TRM11 siRNA (m): sc-154680, TRM11 shRNA Plasmid (h): sc-95500-SH, TRM11 shRNA Plasmid (m): sc-154680-SH, TRM11 shRNA (h) Lentiviral Particles: sc-95500-V and TRM11 shRNA (m) Lentiviral Particles: sc-154680-V.

Molecular Weight of TRM11: 53 kDa.

## 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) 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.

## 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 or our catalog for detailed protocols and support products.