

TRM61 (H-134): sc-98379

BACKGROUND

TRM61 (tRNA m1A58 methyltransferase subunit TRM61), also known as GCD14, is one of two subunits (the other being TRM6) that function as heterotetramers to comprise the tRNA m1A58 methyltransferase. The tRNA m1A58 methyltransferase plays a role in tRNA modification and is specifically responsible for the formation of 1-methyladenosine. 1-methyladenosine is a modified nucleoside found at position 58 in tRNA and is required for maintaining the stability of initiator methionine tRNA (tRNAⁱMet), which is directly involved in the initiation of protein synthesis. This implies that TRM61 is crucial for proper tRNA structure and function. Mutations in the gene encoding TRM61 which cause structural changes in the substrate-binding pocket of tRNA m1A58 methyltransferase can lead to instability of tRNAⁱMet.

REFERENCES

1. Anderson, J., et al. 1998. The essential Gcd10p-Gcd14p nuclear complex is required for 1-methyladenosine modification and maturation of initiator methionyl-tRNA. *Genes Dev.* 12: 3650-3662.
2. Calvo, O., et al. 1999. GCD14p, a repressor of GCN4 translation, cooperates with Gcd10p and Lhp1p in the maturation of initiator methionyl-tRNA in *Saccharomyces cerevisiae*. *Mol. Cell. Biol.* 19: 4167-4181.

CHROMOSOMAL LOCATION

Genetic locus: TRMT61A (human) mapping to 14q32.32; Trmt61a (mouse) mapping to 12 F1.

SOURCE

TRM61 (H-134) is a rabbit polyclonal antibody raised against amino acids 13-146 mapping near the N-terminus of TRM61 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.

APPLICATIONS

TRM61 (H-134) is recommended for detection of TRM61 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).

TRM61 (H-134) is also recommended for detection of TRM61 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for TRM61 siRNA (h): sc-92089, TRM61 siRNA (m): sc-154682, TRM61 shRNA Plasmid (h): sc-92089-SH, TRM61 shRNA Plasmid (m): sc-154682-SH, TRM61 shRNA (h) Lentiviral Particles: sc-92089-V and TRM61 shRNA (m) Lentiviral Particles: sc-154682-V.

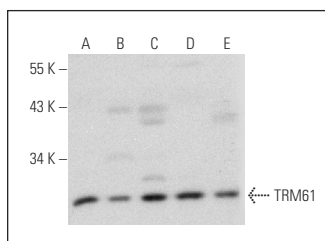
Molecular Weight of TRM61: 33 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, NTERA-2 cl.D1 whole cell lysate: sc-364181 or SW480 cell lysate: sc-2219.

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.

DATA



TRM61 (H-134): sc-98379. Western blot analysis of TRM61 expression in SH-SY5Y (A), NTERA-2 cl.D1 (B), MCF7 (C), CCRF-CEM (D) and SW480 (E) whole cell lysates.

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.

MONOS
Satisfaction
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Try **TRM61 (C1451165): sc-81062**, our highly recommended monoclonal alternative to TRM61 (H-134).