

TREX-1 (M-114): sc-67293

BACKGROUND

TREX-1 (3' repair exonuclease-1), also known as trophoblast expressed 1, CRV, AGS1, AGS5, DRN3, HERNS or DNase III, is a member of the exonuclease superfamily and belongs to the TREX family. Members of the TREX family are involved in DNA metabolism and repair. TREX-1 is expressed in spleen, liver, thymus, colon, heart, brain and small intestine. It localizes to the nucleus and exists as a homodimer. TREX-1 is an exonuclease and its activity requires magnesium as a cofactor. TREX-1 has a preference for double stranded DNA and functions in the 3'-5' direction yielding nucleoside 5'-phosphates. TREX-1 also interacts with the SET complex (an endoplasmic reticulum (ER)-associated complex) and participates in granzyme A-mediated apoptosis. Mutations or defects in the gene encoding TREX-1 have been associated with a variety of diseases, including systemic lupus erythematosus, chilblain lupus (CHBL), Aicardi-Goutieres syndrome type 1 (AGS1) and type 5 (AGS5) and autosomal dominant retinal vasculopathy with cerebral leukodystrophy (CRV).

REFERENCES

- Masuda, S., et al. 2005. Recruitment of the human TREX complex to mRNA during splicing. *Genes Dev.* 19: 1512-1517.
- Crow, Y.J., et al. 2006. Mutations in the gene encoding the 3'-5' DNA exonuclease TREX-1 cause Aicardi-Goutieres syndrome at the AGS1 locus. *Nat. Genet.* 38: 917-920.
- Chowdhury, D., et al. 2006. The exonuclease TREX-1 is in the SET complex and acts in concert with nm23-H1 to degrade DNA during granzyme A-mediated cell death. *Mol. Cell* 23: 133-142.
- Wang, J.Y. and Edelman, W. 2006. Mismatch repair proteins as sensors of alkylation DNA damage. *Cancer Cell* 9: 417-418.
- Namiki, Y. and Zou, L. 2006. ATRIP associates with replication protein A-coated ssDNA through multiple interactions. *Proc. Natl. Acad. Sci. USA* 103: 580-585.

CHROMOSOMAL LOCATION

Genetic locus: TREX1 (human) mapping to 3p21.31; Trex1 (mouse) mapping to 9 F2.

SOURCE

TREX-1 (M-114) is a rabbit polyclonal antibody raised against amino acids 201-314 mapping at the C-terminus of TREX-1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-67293 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

TREX-1 (M-114) is recommended for detection of 3' repair exonuclease 1 of mouse, rat and, to a lesser extent, 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)], immuno-fluorescence (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 TREX-1 siRNA (m): sc-63158, TREX-1 shRNA Plasmid (m): sc-63158-SH and TREX-1 shRNA (m) Lentiviral Particles: sc-63158-V.

TREX-1 (M-114) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

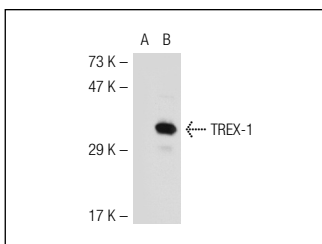
Molecular Weight of TREX-1: 33 kDa.

Positive Controls: TREX-1 (m): 293T Lysate: sc-124276, NIH/3T3 whole cell lysate: sc-2210 or BC₃H1 cell lysate: sc-2299.

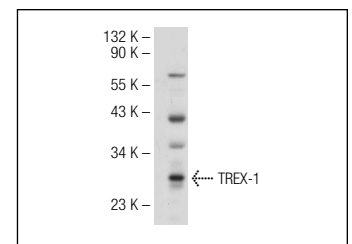
RECOMMENDED SECONDARY REAGENTS

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



TREX-1 (M-114): sc-67293. Western blot analysis of TREX-1 expression in non-transfected: sc-117752 (A) and mouse TREX-1 transfected: sc-124276 (B) 293T whole cell lysates.



TREX-1 (M-114): sc-67293. Western blot analysis of TREX-1 expression in HeLa whole cell lysate.

RESEARCH USE

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

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Try **TREX-1 (E-6): sc-271870** or **TREX-1 (C-11): sc-133112**, our highly recommended monoclonal alternatives to TREX-1 (M-114).