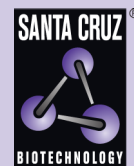


# TREX-1 (C-11): sc-133112



The Power to Question

## BACKGROUND

TREX-1 (three prime 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.

## CHROMOSOMAL LOCATION

Genetic locus: *Trex1* (mouse) mapping to 9 F2.

## SOURCE

TREX-1 (C-11) is a mouse monoclonal 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<sub>2a</sub> kappa light chain 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-133112 X, 200 µg/0.1 ml.

TREX-1 (C-11) is available conjugated to agarose (sc-133112 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-133112 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-133112 PE), fluorescein (sc-133112 FITC), Alexa Fluor® 488 (sc-133112 AF488), Alexa Fluor® 546 (sc-133112 AF546), Alexa Fluor® 594 (sc-133112 AF594) or Alexa Fluor® 647 (sc-133112 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-133112 AF680) or Alexa Fluor® 790 (sc-133112 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## 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 (C-11) is recommended for detection of three prime repair exonuclease 1 of mouse and rat 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).

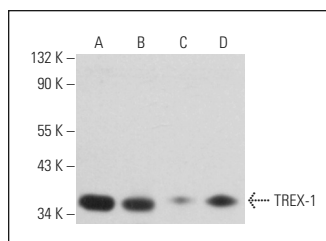
Suitable for use as control antibody for TREX-1 siRNA (m): sc-63158, TREX-1 shRNA Plasmid (m): sc-63158-SH and TREX-1 shRNA (m) Lentiviral Particles: sc-63158-V.

TREX-1 (C-11) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

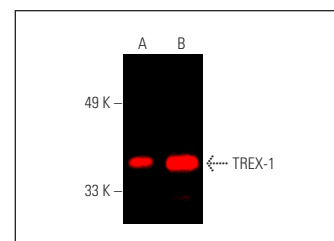
Molecular Weight of TREX-1: 33 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, J774.A1 cell lysate: sc-3802 or M1 whole cell lysate: sc-364782.

## DATA



TREX-1 (C-11): sc-133112. Western blot analysis of TREX-1 expression in M1 (A), J774.A1 (B), L6 (C) and A-10 (D) whole cell lysates.



TREX-1 (C-11): sc-133112. Near-infrared western blot analysis of TREX-1 expression in M1 (A) and RAW 264.7 (B) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.

## SELECT PRODUCT CITATIONS

- Ablasser, A., et al. 2014. TREX-1 deficiency triggers cell-autonomous immunity in a cGAS-dependent manner. *J. Immunol.* 192: 5993-5997.
- Guerra, J., et al. 2020. Lysyl-tRNA synthetase produces diadenosine tetraphosphate to curb STING-dependent inflammation. *Sci. Adv.* 6: eaax3333.
- Vila, I.K., et al. 2022. STING orchestrates the crosstalk between polyunsaturated fatty acid metabolism and inflammatory responses. *Cell Metab.* 34: 125-139.e8.
- Schubert, N., et al. 2022. Genome replication is associated with release of immunogenic DNA waste. *Front. Immunol.* 13: 880413.
- Jiao, H., et al. 2022. ADAR1 averts fatal type I interferon induction by ZBP1. *Nature* 607: 776-783.

## RESEARCH USE

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