

TREX1 Antibody
Rabbit mAb
Catalog # AP91787**Specification****TREX1 Antibody - Product Information**

Application WB, IHC, ICC
Primary Accession [O9NSU2](#)
Clonality Monoclonal
Other Names
AGS1; AGS5; CRV; DNase III; DRN3; HERNS; TREX1;

Isotype Rabbit IgG
Host Rabbit
Calculated MW 33212 Da

TREX1 Antibody - Additional Information

Dilution WB~~1:1000
IHC~~1:100~500
ICC~~N/A
Purification Affinity-chromatography
Immunogen A synthesized peptide derived from human TREX1
Description TREX1 is the major 3'->5' DNA exonuclease in human cells. The protein is a non processive exonuclease that may serve a proofreading function for a human DNA polymerase.
Storage Condition and Buffer Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

TREX1 Antibody - Protein Information

Name TREX1 {ECO:0000303|PubMed:10391904, ECO:0000312|HGNC:HGNC:12269}

Function

Major cellular 3'-to-5' DNA exonuclease which digests single- stranded DNA (ssDNA) and double-stranded DNA (dsDNA) with mismatched 3' termini (PubMed:10391904, PubMed:10393201, PubMed:17293595). Prevents cell-intrinsic initiation of autoimmunity (PubMed:10391904, PubMed:10393201, PubMed:17293595). Acts by

metabolizing DNA fragments from endogenous retroelements, including L1, LTR and SINE elements (PubMed: 10391904, PubMed: 10393201, PubMed: 17293595). Plays a key role in degradation of DNA fragments at cytosolic micronuclei arising from genome instability: its association with the endoplasmic reticulum membrane directs TREX1 to ruptured micronuclei, leading to micronuclear DNA degradation (PubMed: 33476576). Micronuclear DNA degradation is required to limit CGAS activation and subsequent inflammation (PubMed: 33476576). Unless degraded, these DNA fragments accumulate in the cytosol and activate the cGAS-STING innate immune signaling, leading to the production of type I interferon (PubMed: 33476576). Prevents chronic ATM-dependent checkpoint activation, by processing ssDNA polynucleotide species arising from the processing of aberrant DNA replication intermediates (PubMed: 18045533). Inefficiently degrades oxidized DNA, such as that generated upon antimicrobial reactive oxygen production or upon absorption of UV light (PubMed: 23993650). During GZMA-mediated cell death, contributes to DNA damage in concert with NME1 (PubMed: 16818237). NME1 nicks one strand of DNA and TREX1 removes bases from the free 3' end to enhance DNA damage and prevent DNA end reannealing and rapid repair (PubMed: 16818237).

Cellular Location

Nucleus. Cytoplasm, cytosol. Endoplasmic reticulum membrane; Peripheral membrane protein. Note=Retained in the cytoplasm through the C-terminal region (By similarity). Localization to the endoplasmic reticulum membrane is required to direct TREX1 to ruptured micronuclei (PubMed:33476576). In response to DNA damage, translocates to the nucleus where it is specifically recruited to replication foci (PubMed:16818237). Translocation to the nucleus also occurs during GZMA-mediated cell death (PubMed:16818237) {ECO:0000250|UniProtKB:Q91XB0, ECO:0000269|PubMed:16818237, ECO:0000269|PubMed:33476576}

Tissue Location

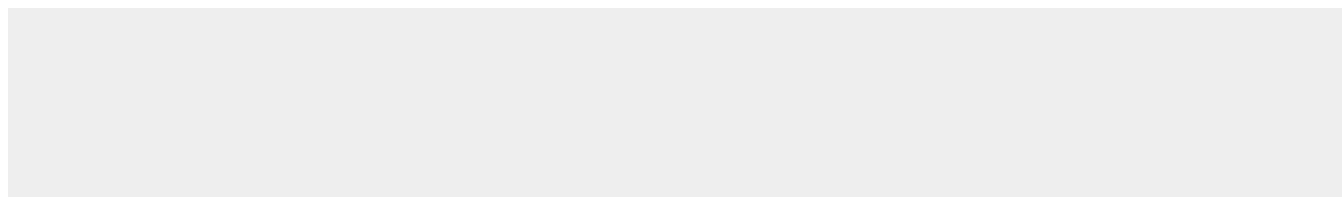
Detected in thymus, spleen, liver, brain, heart, small intestine and colon.

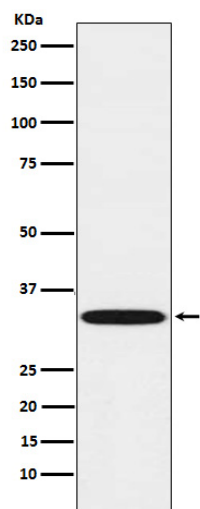
TREX1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

TREX1 Antibody - Images





Western blot analysis of TREX1 expression in Daudi cell lysate.