

Anti-TREX1 Rabbit Monoclonal Antibody
Catalog # ABO15326**Specification****Anti-TREX1 Rabbit Monoclonal Antibody - Product Information**

Application	WB, IHC, IF, ICC
Primary Accession	Q9NSU2
Host	Rabbit
Isotype	IgG
Reactivity	Human
Clonality	Monoclonal
Format	Liquid

Description

Anti-TREX1 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF applications. This antibody reacts with Human.

Anti-TREX1 Rabbit Monoclonal Antibody - Additional Information

Gene ID 11277

Other Names

Three-prime repair exonuclease 1, 3.1.11.2, 3'-5' exonuclease TREX1, Deoxyribonuclease III, DNase III, TREX1 {ECO:0000303|PubMed:10391904, ECO:0000312|HGNC:HGNC:12269}

Calculated MW

33 kDa KDa

Application Details

WB 1:500-1:2000
IHC 1:50-1:200
ICC/IF 1:50-1:200

Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen

A synthesized peptide derived from human TREX1

Purification

Affinity-chromatography

Storage

Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Anti-TREX1 Rabbit Monoclonal 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.

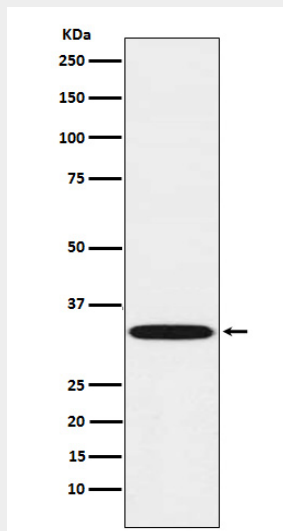
Anti-TREX1 Rabbit Monoclonal Antibody - Protocols

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](#)

Anti-TREX1 Rabbit Monoclonal Antibody - Images



Western blot analysis of TREX1 expression in Daudi cell lysate.