

TREX1 Antibody

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 33	Source/Isotype: Rabbit	UniProt ID: #Q9NSU2	Entrez-Gene Id: 11277
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Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

TREX1 Antibody recognizes endogenous levels of total TREX1 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro317 of human TREX1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

TREX1 is a broadly expressed 3' to 5' exonuclease that acts on single-stranded DNA (ssDNA) to negatively regulate the interferon-stimulatory DNA (ISD) response (1-4). In humans, there are three TREX1 isoforms generated through alternative splicing with predicted molecular weights of 32, 33, and 39 kDa (2). The transcript for the 33 kDa isoform is the most abundant (2). Mice deficient in TREX1 accumulate intracellular ssDNA, which triggers the ISD response and eventually lethal autoimmunity (3,4). Mutations in TREX1 are associated with autoimmune diseases including Aicardi-Goutieres syndrome and systemic lupus erythematosus (5,6). In addition, TREX1 prevents the cell-intrinsic innate immune response to human immunodeficiency virus (HIV) by digesting excess HIV DNA that would normally trigger induction of type I interferon (7).

Background References

1. Mazur, D.J. and Perrino, F.W. (1999) *J Biol Chem* 274, 19655-60.
2. Mazur, D.J. and Perrino, F.W. (2001) *J Biol Chem* 276, 14718-27.
3. Yang, Y.G. et al. (2007) *Cell* 131, 873-86.
4. Stetson, D.B. et al. (2008) *Cell* 134, 587-98.
5. Crow, Y.J. et al. (2006) *Nat Genet* 38, 917-20.
6. Lee-Kirsch, M.A. et al. (2007) *Nat Genet* 39, 1065-7.
7. Yan, N. et al. (2010) *Nat Immunol* 11, 1005-13.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

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