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TRNT1 antibody - N-terminal region

Rabbit Polyclonal Antibody
Catalog # AI11801

Product Information

Application	WB, IHC
Primary Accession	Q96Q11
Other Accession	NM_016000, NP_057084
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Dog, Horse, Bovine
Predicted	Human, Mouse, Rat, Pig, Chicken, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	50128

Additional Information

Gene ID	51095
Alias Symbol	CCA1, MtCCA, CGI-47
Other Names	CCA tRNA nucleotidyltransferase 1, mitochondrial, 2.7.7.72, Mitochondrial tRNA nucleotidyl transferase, CCA-adding, mt CCA-adding enzyme, mt tRNA CCA-diphosphorylase, mt tRNA CCA-pyrophosphorylase, mt tRNA adenylyltransferase, TRNT1
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 100 ul of distilled water. Final anti-TRNT1 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	TRNT1 antibody - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TRNT1 {ECO:0000303|PubMed:25193871, ECO:0000312|HGNC:HGNC:17341}
Function	Nucleotidyltransferase that catalyzes the addition and repair of the essential 3'-terminal CCA sequence in tRNAs, which is necessary for the attachment of amino acids to the 3' terminus of tRNA molecules, using CTP and ATP as substrates (PubMed:11504732, PubMed:25193871, PubMed:25640237, PubMed:25652405, PubMed:29454993, PubMed:30959222, PubMed:31011209, PubMed:34023389). tRNA 3'-terminal CCA addition is required both for tRNA processing and repair (PubMed:22076379,

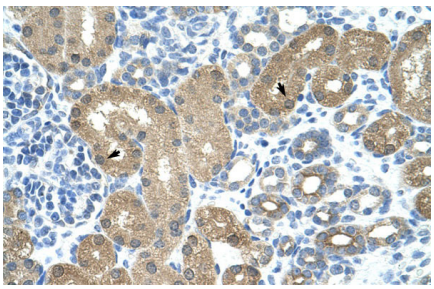
PubMed:25640237). Promotes tRNA repair and recycling downstream of the ribosome-associated quality control (RQC) pathway by mediating addition of the tRNA 3'-terminal CCA following cleavage by ANKZF1 and repair by ELAC1 (PubMed:31011209). Also involved in tRNA surveillance by mediating tandem CCA addition to generate a CCACCA at the 3' terminus of unstable tRNAs and tRNA-like transcripts (PubMed:22076379, PubMed:25640237). While stable tRNAs receive only 3'-terminal CCA, unstable tRNAs beginning with GG are marked with CCACCA and rapidly degraded (PubMed:22076379, PubMed:25640237). The structural flexibility of RNA controls the choice between CCA versus CCACCA addition: following the first CCA addition cycle, nucleotide-binding to the active site triggers a clockwise screw motion, producing torque on the RNA (PubMed:25640237). This ejects stable RNAs, whereas unstable RNAs are refolded while bound to the enzyme and subjected to a second CCA catalytic cycle (PubMed:25640237).

Cellular Location Mitochondrion. Cytoplasm. Nucleus

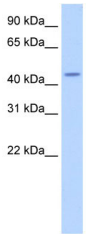
References

Augustin,M.A., (2003) J. Mol. Biol. 328 (5), 985-994Reconstitution and Storage:For short term use, store at 2-8C up to 1 week. For long term storage, store at -20C in small aliquots to prevent freeze-thaw cycles.

Images



Rabbit Anti-TRNT1 Antibody
Paraffin Embedded Tissue: Human Kidney
Cellular Data: Epithelial cells of renal tubule
Antibody Concentration: 4.0-8.0 µg/ml
Magnification: 400X



WB Suggested Anti-TRNT1 Antibody Titration: 2.5µg/ml
ELISA Titer: 1:62500
Positive Control: Human brain

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.