

# TRNT1 antibody - N-terminal region

Rabbit Polyclonal Antibody

Catalog # AI11801

## Product Information

<b>Application</b>	WB, IHC
<b>Primary Accession</b>	<a href="#">Q96Q11</a>
<b>Other Accession</b>	<a href="#">NM_016000</a> , <a href="#">NP_057084</a>
<b>Reactivity</b>	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Dog, Horse, Bovine
<b>Predicted</b>	Human, Mouse, Rat, Pig, Chicken, Bovine
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Calculated MW</b>	50128

## Additional Information

<b>Gene ID</b>	51095
<b>Alias Symbol</b>	CCA1, MtCCA, CGI-47
<b>Other Names</b>	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
<b>Format</b>	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
<b>Reconstitution &amp; Storage</b>	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.
<b>Precautions</b>	TRNT1 antibody - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

<b>Name</b>	TRNT1 {ECO:0000303 PubMed:25193871, ECO:0000312 HGNC:HGNC:17341}
<b>Function</b>	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: <a href="#">11504732</a> , PubMed: <a href="#">25193871</a> , PubMed: <a href="#">25640237</a> , PubMed: <a href="#">25652405</a> , PubMed: <a href="#">29454993</a> , PubMed: <a href="#">30959222</a> , PubMed: <a href="#">31011209</a> , PubMed: <a href="#">34023389</a> ). tRNA 3'-terminal CCA addition is required both for tRNA processing and repair (PubMed: <a href="#">22076379</a> ,

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](#)).

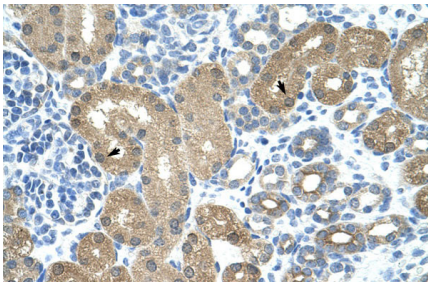
#### Cellular Location

Mitochondrion. Cytoplasm. Nucleus

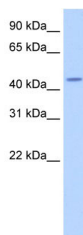
## References

Augustin, M.A., (2003) J. Mol. Biol. 328 (5), 985-994  
Reconstitution and Storage: For short term use, store at 2-8°C up to 1 week. For long term storage, store at -20°C 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: 2.5 µg/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'.