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# QTRT1 Antibody (C-term)

**Affinity Purified Rabbit Polyclonal Antibody (Pab)**
**Catalog # AP17592b**

## Specification

### QTRT1 Antibody (C-term) - Product Information

| | |
|---|---|
| Application | **WB,E** |
| Primary Accession | Q9BXR0 |
| Other Accession | NP_112486.1 |
| Reactivity | **Human** |
| Host | **Rabbit** |
| Clonality | **Polyclonal** |
| Isotype | **Rabbit IgG** |
| Calculated MW | **44048** |
| Antigen Region | **345-371** |

### QTRT1 Antibody (C-term) - Additional Information

**Gene ID** 81890

**Other Names**
Queuine tRNA-ribosyltransferase, Guanine insertion enzyme, tRNA-guanine transglycosylase, QTRT1, TGT, TGUT

**Target/Specificity**
This QTRT1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 345-371 amino acids from the C-terminal region of human QTRT1.

**Dilution**
WB~~1:1000

**Format**
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**
QTRT1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

### QTRT1 Antibody (C-term) - Protein Information

**Name** QTRT1 {ECO:0000255|HAMAP-Rule:MF_03218}

**Synonyms** TGT, TGUT

**Function** Catalytic subunit of the queuine tRNA-ribosyltransferase (TGT) that catalyzes the base-exchange of a guanine (G) residue with queuine (Q) at position 34 (anticodon wobble position) in tRNAs with GU(N) anticodons (tRNA-Asp, -Asn, -His and -Tyr), resulting in the hypermodified nucleoside queuosine (7-(((4,5-cis-dihydroxy-2-cyclopenten-1-yl)amino)methyl)-7-deazaguanosine) (PubMed:11255023, PubMed:20354154, PubMed:34009357, PubMed:34241577). Catalysis occurs through a double-displacement mechanism. The nucleophile active site attacks the C1' of nucleotide 34 to detach the guanine base from the RNA, forming a covalent enzyme-RNA intermediate. The proton acceptor active site deprotonates the incoming queuine, allowing a nucleophilic attack on the C1' of the ribose to form the product (By similarity). Modification of cytoplasmic tRNAs with queuosine controls the elongation speed of cognate codons, thereby ensuring the correct folding of nascent proteins to maintain proteome integrity (PubMed:30093495).

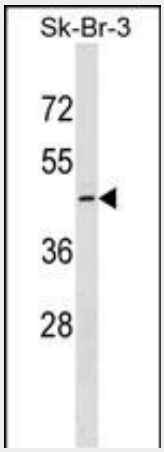
**Cellular Location**
Cytoplasm {ECO:0000255|HAMAP-Rule:MF_03218}. Mitochondrion outer membrane {ECO:0000255|HAMAP-Rule:MF_03218}; Peripheral membrane protein {ECO:0000255|HAMAP-Rule:MF_03218}; Cytoplasmic side {ECO:0000255|HAMAP-Rule:MF_03218}. Note=Weakly associates with mitochondria, possibly via QTRT2. {ECO:0000255|HAMAP- Rule:MF_03218}

## QTRT1 Antibody (C-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## QTRT1 Antibody (C-term) - Images




QTRT1 Antibody (C-term) (Cat. #AP17592b) western blot analysis in SK-BR-3 cell line lysates (35ug/lane).This demonstrates the QTRT1 antibody detected the QTRT1 protein (arrow).

## QTRT1 Antibody (C-term) - Background

tRNA-guanine transglycosylase (TGT; EC 2.4.2.29) synthesizes queuosine (Q), which is found in tRNAs that recognize NAU and NAC codons, encoding tyr, asn, asp, and his. Prokaryotic TGT is a single protein of 43 kD. In contrast, mammalian TGT appears to be a heterodimer consisting of a 60-kD subunit (USP14; MIM 607274) and a 43-kD catalytic subunit (QTRT1) (Deshpande and Katze, 2001 [PubMed 11255023]).

**QTRT1 Antibody (C-term) - References**

Chen, Y.C., et al. RNA 16(5):958-968(2010)
Deshpande, K.L., et al. Gene 265 (1-2), 205-212 (2001) :