

QTRT1 Antibody (C-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP17592b

Specification

QTRT1 Antibody (C-term) - Product Information

Application	WB,E
Primary Accession	O9BXR0
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

Queueine 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

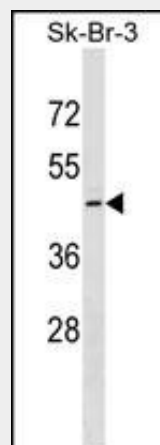
Cytoplasm {ECO:0000255|HAMAP-Rule:MF_03218}. Mitochondrion outer membrane {ECO:0000255|HAMAP-Rule:MF_03218}; Peripheral membrane protein {ECO:0000255|HAMAP-Rule:MF_03218}; Cytoplasmic side {ECO:0000255|HAMAP-Rule:MF_03218}. Note=Weakly associates with mitochondria, possibly via QTRT2. {ECO:0000255|HAMAP-Rule:MF_03218}

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 Cytometry](#)
- [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) :