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QTRT1 Antibody (C-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20812c

Specification

QTRT1 Antibody (C-term) - Product Information

Application	**WB,E**
Primary Accession	Q9BXR0
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**44048**

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 a rabbit immunized with a KLH conjugated synthetic peptide between 303-337 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).

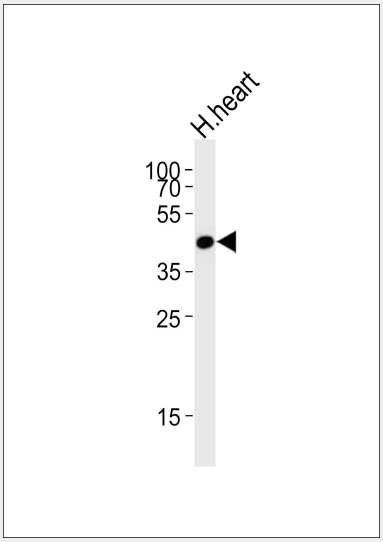
Cellular Location
Cytoplasm {ECO:0000255|HAMAP-Rule:MF_03218}. Mitochondrion outer membrane {ECO:0000255|HAMAP-Rule:MF_03218}; Peripheral membrane protein {ECO:0000255|HAMAP-Rule:MF_03218}; Cytoplasmic side {ECO:0000255|HAMAP-Rule:MF_03218}. Note=Weakly associates with mitochondria, possibly via QTRT2.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



Western blot analysis of lysate from human heart tissue lysate, using QTRT1 Antibody (C-term)(Cat. #AP20812c). AP20812c was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysate at 35ug.

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QTRT1 Antibody (C-term) - Background

Interacts with QTRTD1 to form an active queuine tRNA- ribosyltransferase. This enzyme exchanges queuine for the guanine at the wobble position of tRNAs with GU(N) anticodons (tRNA-Asp, -Asn, -His and -Tyr), thereby forming the hypermodified nucleoside queuosine (Q) (7-(((4,5-cis-dihydroxy-2-cyclopenten-1- yl)amino)methyl)-7-deazaguanosine) (By similarity).

QTRT1 Antibody (C-term) - References

Deshpande K.L.,et al.Gene 265:205-212(2001).
Grimwood J.,et al.Nature 428:529-535(2004).
Burkard T.R.,et al.BMC Syst. Biol. 5:17-17(2011).
Van Damme P.,et al.Proc. Natl. Acad. Sci. U.S.A. 109:12449-12454(2012).