

**QTRT1 Antibody**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS16139****Specification**

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**QTRT1 Antibody - Product Information**

|                   |                        |
|-------------------|------------------------|
| Application       | IHC, WB                |
| Primary Accession | <a href="#">Q9BXR0</a> |
| Reactivity        | Human, Mouse           |
| Host              | Rabbit                 |
| Clonality         | Polyclonal             |
| Calculated MW     | 44kDa KDa              |

**QTRT1 Antibody - Additional Information****Gene ID** 81890**Other Names**

Queuine tRNA-ribosyltransferase, 2.4.2.29, Guanine insertion enzyme, tRNA-guanine transglycosylase, QTRT1, TGT, TGUT

**Target/Specificity**

Human, mouse QTRT1

**Reconstitution & Storage**

Aliquot and freeze at -20° C. Avoid freeze-thaw cycles.

**Precautions**

QTRT1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**QTRT1 Antibody - 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:<a href="http://www.uniprot.org/citations/11255023" target="\_blank">11255023</a>, PubMed:<a href="http://www.uniprot.org/citations/20354154" target="\_blank">20354154</a>, PubMed:<a href="http://www.uniprot.org/citations/34009357" target="\_blank">34009357</a>, PubMed:<a href="http://www.uniprot.org/citations/34241577" target="\_blank">34241577</a>). 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:<a href="http://www.uniprot.org/citations/30093495" target="\_blank">30093495</a>).

#### Cellular Location

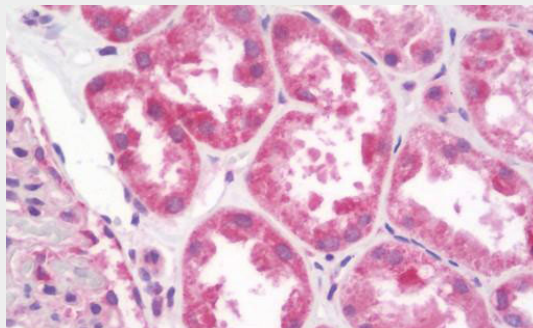
Cytoplasm {ECO:0000255|HAMAP-Rule:MF\_03218}. Mitochondrion outer membrane {ECO:0000255|HAMAP-Rule:MF\_03218}; Peripheral membrane protein {ECO:0000255|HAMAP-Rule:MF\_03218}; Cytoplasmic side {ECO:0000255|HAMAP-Rule:MF\_03218}. Note=Weakly associates with mitochondria, possibly via QTRT2. {ECO:0000255|HAMAP- Rule:MF\_03218}

#### QTRT1 Antibody - Protocols

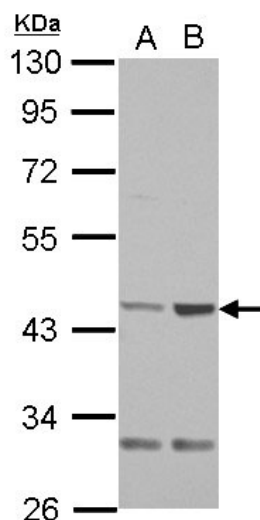
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### QTRT1 Antibody - Images



Anti-QTRT1 antibody IHC staining of human kidney.



Sample (30 ug of whole cell lysate) A: NT2D1 B: PC-3 10% SDS PAGE QTRT1 antibody diluted at 1:1000

### QTRT1 Antibody - 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 - References

Deshpande K.L.,et al.Gene 265:205-212(2001).  
Ota T.,et al.Nat. Genet. 36:40-45(2004).  
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).