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# RPUSD4 Rabbit pAb

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Catalog # AP57272

## Product Information

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| **Application** | IHC-P, IHC-F, IF |
| **Primary Accession** | Q96CM3 |
| **Predicted** | Rat, Pig, Dog, Human, Mouse, Rabbit, Horse |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 42205 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated synthetic peptide derived from human RPUSD4 |
| **Epitope Specificity** | 231-330/377 |
| **Isotype** | IgG |
| **Purity** | affinity purified by Protein A |
| **Buffer** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |

## Additional Information

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| **Gene ID** | 84881 |
| **Other Names** | Pseudouridylate synthase RPUSD4, mitochondrial, 5.4.99.-, RNA pseudouridylate synthase domain-containing protein 4, RPUSD4 {ECO:0000303\|PubMed:27667664, ECO:0000312\|HGNC:HGNC:25898} |
| **Dilution** | IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000 |
| **Storage** | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

## Protein Information

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| **Name** | RPUSD4 {ECO:0000303\|PubMed:27667664, ECO:0000312\|HGNC:HGNC:25898} |
| **Function** | Catalyzes uridine to pseudouridine isomerization (pseudouridylation) of different mitochondrial RNA substrates (PubMed:27974379, PubMed:28082677, PubMed:41136621). Acts on position 1397 in 16S mitochondrial ribosomal RNA (16S mt-rRNA) (PubMed:27974379, PubMed:41136621). This modification is required for the assembly of 16S |

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| | mt-rRNA into a functional mitochondrial ribosome (PubMed:27974379). As a component of a functional protein-RNA module, consisting of RCC1L, NGRN, RPUSD3, RPUSD4, TRUB2, FASTKD2 and 16S mt-rRNA, controls 16S mt- rRNA abundance and is required for intra-mitochondrial translation (PubMed:27667664). Acts on position 39 in mitochondrial tRNA(Phe) (PubMed:28082677). Also catalyzes pseudouridylation of mRNAs in nucleus: acts as a regulator of pre-mRNA splicing by mediating pseudouridylation of pre-mRNAs at locations associated with alternatively spliced regions (PubMed:35051350). Pseudouridylation of pre-mRNAs near splice sites directly regulates mRNA splicing and mRNA 3'-end processing (PubMed:35051350). |
| **Cellular Location** | Mitochondrion matrix. Nucleus Cytoplasm. Note=Mainly localizes to mitochondrion (PubMed:23435261, PubMed:27974379, PubMed:28082677) Localizes to mitochondrial RNA granules, platforms for post- transcriptional RNA modification and ribosome assembly (PubMed:27974379, PubMed:28082677). Also found in nucleus and cytoplasm (PubMed:23435261). |

## Background

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Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.