abcam

ab181121

Anti-RPUSD3 antibody [EPR12911]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR12911
Purity	Tissue culture supernatant

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000 - 1/2000
Notes	-

Predicted

Species	Mouse, Rat

Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/290
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information RPUSD3

Function	Catalyzes uridine to pseudouridine isomerization (pseudouridylation) of specific mitochondrial mRNAs (mt-mRNAs), a post-transcriptional modification necessary

for their translation. Acts at position 390 in COXI mt-mRNA and at position 697-699 in mitochondrial COXIII mt-mRNA (PubMed:27974379). As a component of a functional protein-RNA module, consisting of RCC1L, NGRN, RPUSD3, RPUSD4, TRUB2, FASTKD2 and 16S mitochondrial ribosomal RNA (16S mt-rRNA), controls 16S mt-rRNA abundance and may play a role in mitochondrial ribosome biogenesis (PubMed:27667664).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	RPUSD3 also known as RNA pseudouridylate synthase domain containing 3 is an enzyme involved in RNA modification. This protein has a mass of approximately 60 kDa and exhibits expression in various tissues including the brain heart and skeletal muscle. The enzyme plays a role in catalyzing the isomerization of uridine

	to pseudouridine in RNA molecules an important step for RNA stability and function.
Biological function summary	RPUSD3 contributes to the modification of ribosomal RNA (rRNA) enhancing its structural stability and translation fidelity. This protein operates as part of a ribonucleoprotein complex engaging with other molecules to facilitate the precise modification processes necessary for proper RNA function. These modifications are important for cellular health and protein biosynthesis.
Pathways	The enzymatic activity of RPUSD3 integrates into the RNA modification pathway influencing an important process for gene expression regulation. It works alongside proteins like dyskerin which also participates in pseudouridine synthesis within the small subunit processome. This involvement positions RPUSD3 as a significant player in rRNA processing ensuring the correct assembly of ribosomes.
Associated diseases and disorders	Alterations in RPUSD3 activity have been connected to certain neurodevelopmental disorders. Research suggests that abnormal RPUSD3 function may contribute to intellectual disability where it is seen to interact with proteins involved in neuronal development such as FMRP. Additionally this protein's altered activity associates with metabolic disorders which highlights its relevance to maintaining normal metabolic processes.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

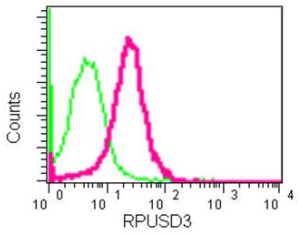
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

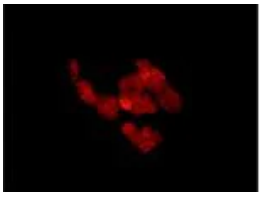
3 product images



Flow Cytometry (Intracellular) - Anti-RPUSD3 antibody [EPR12911] (ab181121)

RPUSD3 Flow Cytometry (Intracellular) staining using rabbit Anti-RPUSD3 antibody

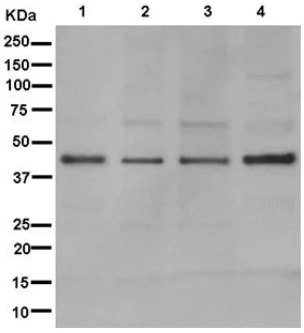
Intracellular Flow Cytometry analysis of U87-MGcells using ab181121at a 1/290 dilution (red) or aRabbit monoclonal IgG (negative) (green). Goat anti rabbit IgG (FITC) secondary usedat a 1/150 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-RPUSD3 antibody [EPR12911] (ab181121)

RPUSD3 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-RPUSD3 antibody

Immunofluorescence analysis of SH-SY5Y cells (fixative 4% paraformaldehyde) labeling RPUSD3 with ab181121 at a 1/250 dilution. Goat anti rabbit IgG (Alexa Fluor® 555) secondary used at a 1/200 diution.



Western blot - Anti-RPUSD3 antibody [EPR12911] (ab181121)

All lanes:
Western blot - Anti-RPUSD3 antibody [EPR12911] (ab181121) at 1/1000 dilution

Lane 1:
U87-MG lysate at 20 µg

Lane 2:
SH-SY5Y lysate at 20 µg

Lane 3:
293T lysate at 20 µg

Lane 4:
Human fetal brain lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 38 kDa

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