abcam

ab249810

Anti-IPT antibody [EPR12517] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR12517
Purification technique	Affinity purification

Reactivity data

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information TRIT1

Function	Catalyzes the transfer of a dimethylallyl group onto the adenine at position 37 of both cytosolic and mitochondrial tRNAs, leading to the formation of N6-(dimethylallyl)adenosine (i6A37) (PubMed:11111046, PubMed:24126054, PubMed:24901367, PubMed:34774131). Mediates modification of a limited subset of tRNAs: tRNA(Ser)(AGA), tRNA(Ser)(CGA), tRNA(Ser)(UGA), as well as partial modification of the selenocysteine tRNA(Ser)(UCA) (PubMed:24126054). TRIT1 is therefore required for selenoprotein expression (PubMed:24126054).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab249810 is the carrier-free version of ab174308.
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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	The biological target 'IPT' also known as isopentenyl transferase is an enzyme involved in the catalysis of certain biochemical reactions. This enzyme has a molecular mass of approximately 32 kDa and is often expressed in various plant tissues including roots shoots and leaves. In the context of its role IPT facilitates the transfer of the isopentenyl group to adenine leading to the biosynthesis of cytokinins which are essential hormones for plant growth and development.
Biological function summary	IPT plays a central role in cytokinin biosynthesis by converting dimethylallyl diphosphate (DMAPP) and adenosine monophosphate (AMP) into isopentenyl adenine a precursor of cytokinin. Cytokinins together with auxins regulate cell division differentiation and apical dominance. IPT is often found as a part of a complex network of enzymatic reactions contributing to these processes. Its activity profoundly affects plant morphology and physiology by influencing the allocation of resources and determining plant architecture.
Pathways	IPT fits into the cytokinin biosynthetic pathway collaborating with other enzymes involved in plant hormone regulation. It plays an important role in modulating the balance between cytokinin and auxin levels which controls many developmental processes. The enzyme is closely associated with the IPT family of proteins and interfaces with the homodomain transcription factors that regulate plant growth responses to environmental stimuli. This places IPT in pivotal intersection points of hormonal and stress response pathways in plants.
Associated diseases and disorders	Research highlights the importance of IPT's manipulation in plant biotechnology for crop improvement and stress resistance. Its association with increased cytokinin production has shown benefits such as delayed leaf senescence and enhanced resistance to drought and pathogens. There are indirect links between IPT and proteins involved in disease resistance pathways such as the pathogenesis-related proteins. Exploiting IPT's function in agricultural settings can lead to better yield stability and reduced agricultural losses due to environmental stressors.

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

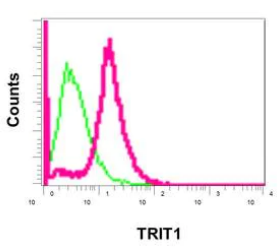
We do not recommend this combination. It is not covered by our product promise.

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.

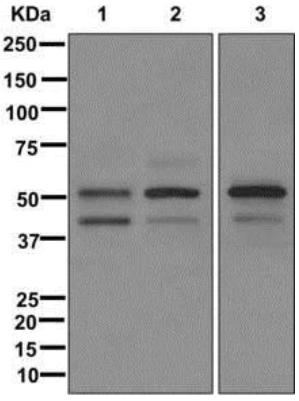
2 product images



Flow Cytometry (Intracellular) - Anti-IPT antibody [EPR12517] - BSA and Azide free (ab249810)

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

This data was developed using ab174308, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeabilized Raji cells labeling IPT with ab174308 at 1/100 dilution (red) compared to a rabbit IgG negative control (green).



Western blot - Anti-IPT antibody [EPR12517] - BSA and Azide free (ab249810)

IPT Western blot staining using rabbit Anti-IPT antibody

This data was developed using ab174308, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-IPT antibody [EPR12517] (ab174308) at 1/1000 dilution

Lane 1:
Jurkat cell lysate at 10 µg

Lane 2:

Fetal lung lysate at 10 µg

Lane 3:
Raji cell lysate at 10 µg

Predicted band size: 53 kDa

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