abcam

ab248822

Anti-14-3-3 gamma/YWHAG antibody [EPR9655(B)] - 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	EPR9655(B)
Purification technique	Affinity purification
Concentration	1.02 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-

Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

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 YWHAG

Function

Adapter protein implicated in the regulation of a large spectrum of both general and specialized signaling pathways (PubMed:15696159, PubMed:16511572, PubMed:36732624). Binds to a large number of partners, usually by recognition of a phosphoserine or phosphothreonine motif (PubMed:15696159, PubMed:16511572, PubMed:36732624). Binding generally results in the modulation of the activity of the binding partner (PubMed:16511572). Promotes inactivation of WDR24 component of the GATOR2 complex by binding to phosphorylated WDR24 (PubMed:36732624). Participates in the positive regulation of NMDA glutamate receptor activity by promoting the L-glutamate secretion through interaction with BEST1 (PubMed:29121962). Reduces keratinocyte intercellular adhesion, via interacting with PKP1 and sequestering it in the cytoplasm, thereby reducing its incorporation into desmosomes (PubMed:29678907). Plays a role in mitochondrial protein catabolic process (also named MALM) that promotes the degradation of damaged proteins inside mitochondria (PubMed:22532927).

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

ab248822 is the carrier-free version of ab137106.

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	14-3-3 gamma also known as YWHAG or 14-3-3 gamma protein is a member of the 14-3-3 protein family. These proteins play significant roles in signal transduction. 14-3-3 gamma is a dimeric protein with a molecular mass of about 28 to 32 kDa per monomer. It is ubiquitously expressed including in tissues such as brain muscle and heart. This protein influences a wide range of cellular processes by interacting with various signaling proteins often through recognition of phosphorylated serine or threonine motifs.
Biological function summary	Proteins within the 14-3-3 family like the 14-3-3 gamma function as adaptors and scaffolds in signal transduction pathways. They are part of multi-protein complexes that modulate interactions among proteins within the cell. 14-3-3 gamma interacts dynamically with a variety of target proteins assisting in their activities and proper localization. Its interaction facilitates cellular processes including cell cycle control apoptosis and stress response owing to its activity as a regulator of distinct signaling pathways.
Pathways	14-3-3 gamma participates in the MAPK/ERK pathway which is pivotal for cell growth and differentiation. It also plays an integral role in the PI3K/AKT pathway which contributes to survival and proliferation signals. In these pathways 14-3-3 gamma interacts with important kinases such as Raf and AKT. These interactions help transduce signals from receptors on the cell surface to the nucleus impacting gene expression and cellular responses.

Associated diseases and disorders	Research has linked 14-3-3 gamma to neurodegenerative diseases such as Alzheimer's disease. In Alzheimer's 14-3-3 gamma interacts with proteins like tau which become abnormally phosphorylated and aggregate. Additionally this protein has associations with certain cancers where it might influence tumor growth and progression through interactions with cell cycle regulatory proteins. Its modulation of key signaling pathways makes it a candidate of interest in the development of therapeutic strategies for these diseases.

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

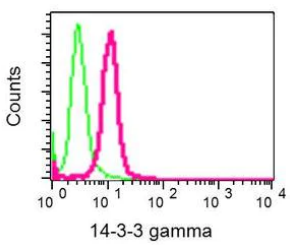
We do not recommend this combination. It is not covered by our product promise.

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.

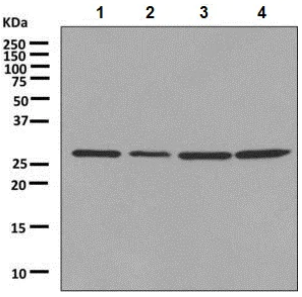
3 product images



Flow Cytometry (Intracellular) - Anti-14-3-3 gamma/YWHAG antibody [EPR9655(B)] - BSA and Azide free (ab248822)

14-3-3 gamma/YWHAG Flow Cytometry (Intracellular) staining using rabbit Anti-14-3-3 gamma/YWHAG antibody

This data was developed using ab137106, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of K562 cells labelling 14-3-3-gamma with ab137106 at 1/10 dilution (red). Negative Rabbit IgG control shown in green.



Western blot - Anti-14-3-3 gamma/YWHAG antibody [EPR9655(B)] - BSA and Azide free (ab248822)

This data was developed using ab137106, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-14-3-3 gamma/YWHAG antibody [EPR9655(B)] (ab137106) at 1/1000 dilution

Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
A431 cell lysate at 10 µg

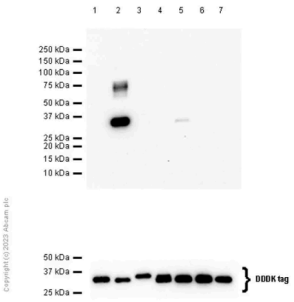
Lane 3:
293T cell lysate at 10 µg

Lane 4:
K562 cell lysate at 10 µg

Secondary

All lanes:
HRP-labelled Goat anti-Rabbit at 1/2000 dilution

Predicted band size: 28 kDa



Western blot - Anti-14-3-3 gamma/YWHAG antibody [EPR9655(B)] - BSA and Azide free (ab248822)

This data was developed using ab137106, the same antibody clone in a different buffer formulation. Blocking and dilution buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-14-3-3 gamma/YWHAG antibody [EPR9655(B)] (ab137106) at 1/1000 dilution

Lane 1:
14-3-3 beta (YWHAB) Human Recombinant Protein 50 ng, with DDDK tagged at 50 ng

Lane 2:
14-3-3 gamma (YWHAG) Human Recombinant Protein 50 ng, with DDDK tagged at 50 ng

Lane 3:
14-3-3 epsilon (YWHAE) Human Recombinant Protein 50 ng, with DDDK tagged at 50 ng

Lane 4:
14-3-3 zeta (YWHAZ) Human Recombinant Protein 50 ng, with DDDK tagged at 50 ng

Lane 5:
14-3-3 eta (YWHAH) Human Recombinant Protein 50 ng, with DDDK tagged at 50 ng

Lane 6:
14-3-3 theta (YWHAQ) Human Recombinant Protein 50 ng, with DDDK tagged at 50 ng

Lane 7:
14-3-3 sigma (SFN) Human Recombinant Protein 50 ng, with DDDK tagged at 50 ng

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 28 kDa

Observed band size: 28 kDa

Exposure time: 20s

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