abcam

ab239903

Anti-YWHAE antibody [EPR3918] - BSA and Azide free

Recombinant | RabMAb | KO Validated

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	EPR3918
Purification technique	Affinity purification Protein A
Concentration	1.047 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Human, Rat, Mouse
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, Rat, Mouse
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Rat, Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Rat, Mouse
Dilution info	-
Notes	-

Target data

See full target information YWHAE

Function

Adapter protein implicated in the regulation of a large spectrum of both general and specialized signaling pathways (PubMed:21189250). Binds to a large number of partners, usually by recognition of a phosphoserine or phosphothreonine motif (PubMed:35343654). Binding generally results in the modulation of the activity of the binding partner (By similarity). Positively regulates phosphorylated protein HSF1 nuclear export to the cytoplasm (PubMed:12917326). Plays a positive role in the antiviral signaling pathway upstream of TBK1 via interaction with RIGI (PubMed:37555661). Mechanistically, directs RIGI redistribution from the cytosol to mitochondrial associated membranes where it mediates MAVS-dependent innate immune signaling during viral infection (PubMed:22607805). Plays a role in proliferation inhibition and cell cycle arrest by exporting HNRNPC from the nucleus to the cytoplasm to be degraded by ubiquitination (PubMed:37599448).

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

ab239903 is the carrier-free version of ab92311.

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 YWHAE protein also known as 14-3-3E acts as a regulatory molecule by binding to various phosphoserine-containing proteins. It plays key roles in cellular signaling and exists as a dimer. YWHAE has a molecular mass of around 29 kDa and is widely expressed in tissues including the brain heart and skeletal muscle. Its interactions often rely on its abundant presence in various cell types showing its versatility.
Biological function summary	YWHAE protein interacts with several enzymes and receptors forming complexes that affect their functional states. It is a member of the 14-3-3 family which facilitates signal transduction by binding to phosphorylated serine/threonine residues. This protein influences processes like cell cycle control apoptosis and stress responses emphasizing its significant roles in maintaining cellular homeostasis.
Pathways	YWHAE plays significant roles in the Akt and MAPK pathways. In the Akt pathway YWHAE partners with proteins like BAD and FOXO which are important in controlling apoptosis and cell survival. In the MAPK pathway it regulates multiple

	proteins including Raf and MEK impacting cell growth and differentiation. Understanding YWHAE's interactions in these pathways highlights its influence in critical signaling events.
Associated diseases and disorders	YWHAE has been tied to schizophrenia and neurodevelopmental disorders. In schizophrenia it interacts with proteins like DISC1 affecting neuronal migration and synaptic function. In neurodevelopmental disorders alterations in YWHAE can lead to compromised signaling that disrupts normal brain function. These connections highlight the importance of YWHAE in maintaining neurological health.

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

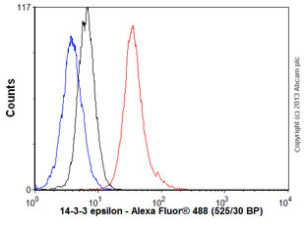
We do not recommend this combination. It is not covered by our product promise.

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

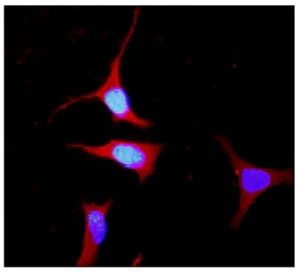


Flow Cytometry (Intracellular) - Anti-YWHAE antibody [EPR3918] - BSA and Azide free (ab239903)

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

Overlay histogram showing SH-SY5Y cells stained with ab92311 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab92311, 1/1000 dilution) for 30 min at 22°C. The

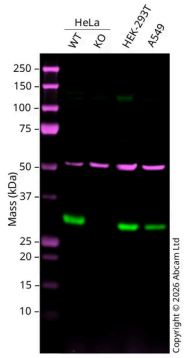
secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive signal in SH-SY5Y cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92311).



Immunocytochemistry/ Immunofluorescence - Anti-YWHAE antibody [EPR3918] - BSA and Azide free (ab239903)

YWHAE Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-YWHAE antibody

ab92311 at 1/100 dilution staining YWHAE in HeLa cells by Immunofluorescence.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92311).



Western blot - Anti-YWHAE antibody [EPR3918] - BSA and Azide free (ab239903)

YWHAE Western blot staining using rabbit Anti-YWHAE antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92311).

Western blot: Anti-YWHAE antibody [EPR3918] ab92311 staining at 1/1000 dilution, shown in green; Mouse anti alpha Tubulin ab7291 loading control staining at 1/20000 dilution, shown in magenta. A band was observed at 29 kDa in Wild-type HeLa cell lysates with no signal observed at this size in YWHAE knockout HeLa cell line. To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 5% Milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit 800CW and Goat anti-Mouse 680RD at 1/20,000 dilution.
All lanes:
Western blot - Anti-YWHAE antibody [EPR3918] (ab92311) at 1/1000 dilution

Lane 1:
Wild-type HeLa cell lysates at 20 µg

Lane 2:
Western blot - Human YWHAE knockout HeLa cell line (ab274939) at 20 µg

Lane 3:
HEK-293T cell lysates at 20 µg

Lane 4:
A549 cell lysates at 20 µg

Secondary

All lanes:
Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 29 kDa

Observed band size: 29 kDa

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