abcam

ab32560

Anti-14-3-3 alpha + beta antibody [Y62]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	Y62
Purification technique	Affinity purification Protein A
Concentration	0.093 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/1000
Notes	-

Species	Mouse

Dilution info	1/1000
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/1000
Notes	-

Species	Mouse
Dilution info	1/1000
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

Not recommended

Species	Recombinant full length protein - Human

Dilution info	-
Notes	-

WB

Tested

Species	Recombinant full length protein - Human
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

Expected

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

IHC-P

Tested

Species	Human
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

Target data

See full target information YWHAB

Function	Adapter protein implicated in the regulation of a large spectrum of both general and specialized signaling pathways. Binds to a large number of partners, usually by recognition of a phosphoserine or phosphothreonine motif. Binding generally results in the modulation of the activity of the binding partner. Negative regulator of osteogenesis. Blocks the nuclear translocation of the phosphorylated form (by AKT1) of SRPK2 and antagonizes its stimulatory effect on cyclin D1 expression resulting in blockage of neuronal apoptosis elicited by SRPK2. Negative regulator of signaling cascades that mediate activation of MAP kinases via AKAP13.

Storage

Shipped at conditions	Conditional Ambient
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	14-3-3 alpha + beta proteins also known as YWHAZ (14-3-3 zeta) and YWHAB (14-3-3 beta) are part of a family of conserved proteins weighing approximately 28-33 kDa each. These proteins are found in many tissues and engage in binding phosphorylated serine/threonine residues on their target molecules. This binding influences the activity localization and stability of these target proteins. Expression of 14-3-3 alpha + beta proteins is prominent in the brain where they participate in key signaling pathways.
Biological function summary	14-3-3 proteins play central roles in regulating diverse cellular processes. These proteins frequently serve as scaffolding molecules stabilizing complexes for signal transduction pathways. By interacting with numerous partner proteins 14-3-3 complexes modulate cell cycle control apoptosis and DNA damage response. They help maintain cellular homeostasis by binding and regulating enzymes receptors and transcription factors.
Pathways	14-3-3 proteins are integral to many signaling cascades. The MAPK/ERK pathway involves these proteins with 14-3-3 binding to Raf kinases influencing signal transduction. They also participate in the PI3K/Akt pathway where 14-3-3 interaction with Akt affects cell survival and growth. 14-3-3 proteins regulate various cellular functions by interacting with related kinases and phosphatases in these pathways.
Associated diseases and disorders	Alterations of 14-3-3 protein function have significant implications. Neurodegenerative disorders such as Alzheimer's disease show changes in 14-3-3 protein binding patterns affecting neuronal stability. Aberrant 14-3-3 interactions also connect to cancerous pathways particularly in breast cancer where regulation of p53 and other tumor suppressor proteins becomes disrupted. 14-3-3 proteins influence disease progression through their extensive network of protein interactions.

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

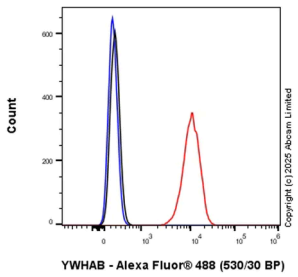
We do not recommend this combination. It is not covered by our product promise.

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.

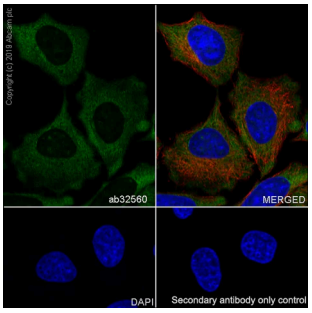
8 product images



Flow Cytometry (Intracellular) - Anti-14-3-3 alpha + beta antibody [Y62] (ab32560)

14-3-3 alpha + beta Flow Cytometry (Intracellular) staining of Hela (human cervical adenocarcinoma epithelial cell) using rabbit Anti-14-3-3 alpha + beta antibody

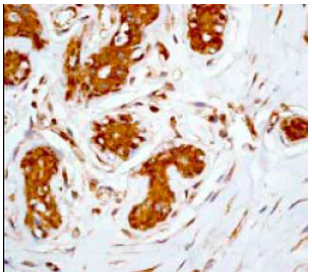
Flow cytometric analysis of Hela (human cervical adenocarcinoma epithelial cell) cells labelling 14-3-3 alpha + beta with ab32560 at 1/1000 dilution (0.1ug) (Red) compared with a Secondary Antibody - Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150081) and Isotype control - Rabbit monoclonal IgG (ab172730) (Black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).



Immunocytochemistry/ Immunofluorescence - Anti-14-3-3 alpha + beta antibody [Y62] (ab32560)

14-3-3 alpha + beta Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-14-3-3 alpha + beta antibody

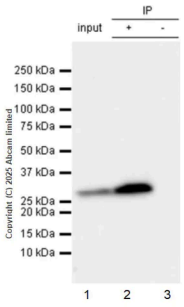
Immunocytochemistry/ Immunofluorescence analysis of HeLa (human cervix adenocarcinoma epithelial cell) cells labeling 14-3-3 alpha + beta with purified ab32560 at 1/100 dilution (10 µg/mL). Cells were fixed in 100% Methanol. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/mL) dilution. DAPI (blue) was used as nuclear counterstain. ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL) was used as the secondary antibody only control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-14-3-3 alpha + beta antibody [Y62] (ab32560)

14-3-3 alpha + beta Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-14-3-3 alpha + beta antibody

ab32560, at a 1/500 dilution, staining 14-3-3 alpha + beta in paraffin embedded human breast tissue by Immunohistochemistry.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-14-3-3 alpha + beta antibody [Y62] (ab32560)

14-3-3 alpha + beta was immunoprecipitated from 10ug HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate with ab32560 at 1/30 dilution (2 µg in 0.35 mg lysates). Western blot was performed on the immunoprecipitate using ab32560 at 1/1000 dilution.
VeriBlot for IP secondary antibody(HRP) (ab131366) was used at 1/5000 dilution.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

All lanes:
Immunoprecipitation - Anti-14-3-3 alpha + beta antibody [Y62] (ab32560) at 1/1000 dilution

Lane 1:
HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate at 10 µg

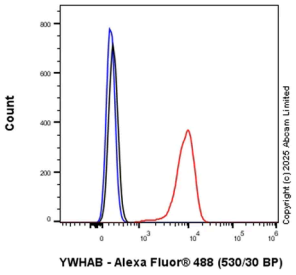
Lane 2:
ab32560 at 1/30 in HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate at 10 µg

Lane 3:
Rabbit monoclonal IgG (ab172730) instead of ab32560 in HeLa whole cell lysate at 10 µg

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

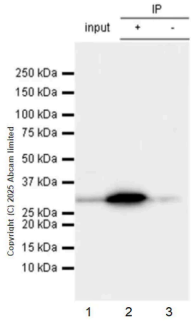
Exposure time: 6s



Flow Cytometry (Intracellular) - Anti-14-3-3 alpha + beta antibody [Y62] (ab32560)

14-3-3 alpha + beta Flow Cytometry (Intracellular) staining of NIH/3T3 (mouse embryonic fibroblast) using rabbit Anti-14-3-3 alpha + beta antibody

Flow cytometric analysis of NIH/3T3 (mouse embryonic fibroblast) cells labelling 14-3-3 alpha + beta with ab32560 at 1/1000 dilution (0.1ug) (Red) compared with a Secondary Antibody - Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150081) and Isotype control - Rabbit monoclonal IgG (ab172730) (Black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).



Immunoprecipitation - Anti-14-3-3 alpha + beta antibody [Y62] (ab32560)

14-3-3 alpha + beta was immunoprecipitated from 10ug NIH/3T3 (mouse embryonic fibroblast) whole cell lysate with ab32560 at 1/30 dilution (2 µg in 0.35 mg lysates). Western blot was performed on the immunoprecipitate using ab32560 at 1/1000 dilution.
VeriBlot for IP secondary antibody(HRP) (ab131366) was used at 1/5000 dilution.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

All lanes:
Immunoprecipitation - Anti-14-3-3 alpha + beta antibody [Y62] (ab32560) at 1/1000 dilution

Lane 1:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 10 µg

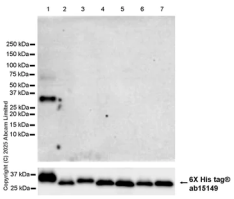
Lane 2:
ab32560 at 1/30 in NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 10 µg

Lane 3:
Rabbit monoclonal IgG (ab172730) instead of ab32560 in NIH/3T3 whole cell lysate at 10 µg

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 6s



Western blot - Anti-14-3-3 alpha + beta antibody [Y62] (ab32560)

14-3-3 alpha + beta Western blot staining using rabbit Anti-14-3-3 alpha + beta antibody

In Western blot, Anti-6X His tag® antibody [AD1.1.10] (ab15149) total protein control and secondary antibody used was Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/20000 dilution.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

ab32560 does not react with other 14-3-3 protein families.
All lanes:
Western blot - Anti-14-3-3 alpha + beta antibody [Y62] (ab32560) at 1/1000 dilution

Lane 1:
Human 14-3-3 beta (YWHAB) Recombinant Protein with a his tag

Lane 2:
Human 14-3 3 gamma (YWHAG) Recombinant Protein with a his tag

Lane 3:
Human 14-3-3 epsilon (YWHAE) Recombinant Protein with a his tag

Lane 4:
Human 14-3-3 zeta (YWHAZ) Recombinant Protein with a his tag

Lane 5:
Human 14 3 3 eta (YWHAH) Recombinant Protein with a his tag

Lane 6:
Human 14-3-3 theta (YWHAQ) Recombinant Protein with a his tag

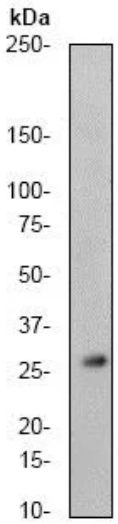
Lane 7:
Human 14-3-3 sigma (SFN) Recombinant Protein with a his tag

Secondary

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

Observed band size: 30 kDa

Exposure time: 42s



Western blot - Anti-14-3-3 alpha + beta antibody [Y62] (ab32560)

14-3-3 alpha + beta Western blot staining of Hela cell lysate using rabbit Anti-14-3-3 alpha + beta antibody

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