abcam

ab247635

Anti-Caspase-6/CASP-6 antibody [EPR4405] - 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	EPR4405
Purification technique	Affinity purification Protein A
Specificity	This antibody detects both the full length and cleaved forms of Caspase-6/CASP-6.
Concentration	0.977 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Not recommended

Species	Mouse, Human, Rat

Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse, Human, 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 CASP6

Function

Cysteine protease that plays essential roles in programmed cell death, axonal degeneration, development and innate immunity (PubMed:19133298, PubMed:22858542, PubMed:27032039, PubMed:28864531, PubMed:30420425, PubMed:32298652, PubMed:8663580). Acts as a non-canonical executioner caspase during apoptosis: localizes in the nucleus and cleaves the nuclear structural protein NUMA1 and lamin A/LMNA thereby inducing nuclear shrinkage and fragmentation (PubMed:11953316, PubMed:17401638, PubMed:8663580, PubMed:9463409). Lamin-A/LMNA cleavage is required for chromatin condensation and nuclear disassembly during apoptotic execution (PubMed:11953316). Acts as a regulator of liver damage by promoting hepatocyte apoptosis: in absence of phosphorylation by AMP-activated protein kinase (AMPK), catalyzes cleavage of BID, leading to cytochrome c release, thereby participating in nonalcoholic steatohepatitis (PubMed:32029622). Cleaves PARK7/DJ-1 in cells undergoing apoptosis (By similarity). Involved in intrinsic apoptosis by mediating cleavage of RIPK1 (PubMed:22858542). Furthermore, cleaves many transcription factors such as NF-kappa-B and cAMP response element-binding protein/CREBBP (PubMed:10559921, PubMed:14657026). Cleaves phospholipid scramblase proteins XKR4 and XKR9 (By similarity). In addition to apoptosis, involved in different forms of programmed cell death (PubMed:32298652). Plays an essential role in defense against viruses by acting as a central mediator of the ZBP1-mediated pyroptosis, apoptosis, and necroptosis (PANoptosis), independently of its cysteine protease activity (PubMed:32298652). PANoptosis is a unique inflammatory programmed cell death, which provides a molecular scaffold that allows the interactions and activation of machinery required for inflammasome/pyroptosis, apoptosis and necroptosis (PubMed:32298652). Mechanistically, interacts with RIPK3 and enhances the interaction between RIPK3 and ZBP1, leading to ZBP1-mediated inflammasome activation and cell death (PubMed:32298652). Plays an essential role in axon degeneration during axon pruning which is the remodeling of axons during neurogenesis but not apoptosis (By similarity). Regulates B-cell programs both during early development and after antigen stimulation (By similarity). (Microbial infection) Proteolytically cleaves the N protein of coronaviruses such as MERS-CoV and SARS-CoV (PubMed:18155731, PubMed:35922005). The cleavage of MERS-CoV N-protein leads to two fragments and modulates coronavirus replication by regulating IFN signaling. The two fragments produced by the cleavage interact with IRF3 inhibiting its nuclear translocation after activation and reduce the expression of IFNB and IFN-stimulated genes (PubMed:35922005). The

same mechanism seems to be used by other coronaviruses such as SARS-CoV and SARS-CoV-2 to enhance their replication (PubMed:35922005).

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

ab247635 is the carrier-free version of ab108335.

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.

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

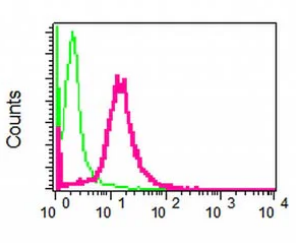
We do not recommend this combination. It is not covered by our product promise.

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.

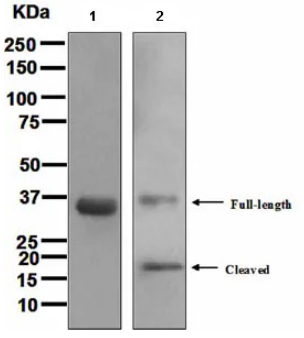
3 product images



Flow Cytometry (Intracellular) - Anti-Caspase-6/CASP-6 antibody [EPR4405] - BSA and Azide free (ab247635)

Caspase-6/CASP-6 Flow Cytometry (Intracellular) staining using rabbit Anti-Caspase-6/CASP-6 antibody

This data was developed using ab108335, the same antibody clone in a different buffer formulation.
ab108335, at 1/10 dilution, staining Caspase-6/CASP-6 in permeabilized Jurkat cells by intracellular flow cytometry (shown in red). Rabbit IgG shown in green (negative).



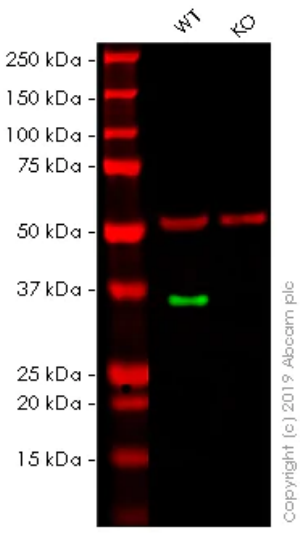
Western blot - Anti-Caspase-6/CASP-6 antibody [EPR4405] - BSA and Azide free (ab247635)

This data was developed using ab108335, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-Caspase-6/CASP-6 antibody [EPR4405] (ab108335) at 1/1000 dilution

Lane 1:
Jurkat cell lysate at 10 µg

Lane 2:
Jurkat + staurosporine cell lysate at 10 µg

Predicted band size: 33 kDa



Western blot - Anti-Caspase-6/CASP-6 antibody [EPR4405] - BSA and Azide free (ab247635)

This data was developed using ab108335, the same antibody clone in a different buffer formulation.
Lanes 1 - 2: Merged signal (red and green). Green - ab108335 observed at 37 kDa. Red - loading control, ab7291, observed at 50 kDa.

ab108335 was shown to specifically react with in wild-type HAP1 cells as signal was lost in CASP6 knockout cells. Wild-type and CASP6 knockout samples were subjected to SDS-PAGE. The membrane was blocked with 3% NF Milk. ab108335 and ab7291 (Mouse anti Tubulin loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ab216776 secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-Caspase-6/CASP-6 antibody [EPR4405] (ab108335) at 1/1000 dilution

Lane 1:
Wild-type HAP1 whole cell lysate at 20 µg

Lane 2:
CASP6 knockout HAP1 whole cell lysate at 20 µg

Predicted band size: 33 kDa

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