abcam

ab247420

Anti-HtrA2 / Omi antibody [EPR22] - 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	EPR22
Purification technique	Affinity purification Protein A
Concentration	0.957 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	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 HTRA2

Function	Isoform 1. Serine protease that shows proteolytic activity against a non-specific substrate beta-casein (PubMed:10873535). Promotes apoptosis by either relieving the inhibition of BIRC proteins on caspases, leading to an increase in caspase activity; or by a BIRC inhibition-independent, caspase-independent and serine protease activity-dependent mechanism (PubMed:15200957). Cleaves BIRC6 and relieves its inhibition on CASP3, CASP7 and CASP9, but it is also prone to inhibition by BIRC6 (PubMed:36758104, PubMed:36758105). Cleaves THAP5 and promotes its degradation during apoptosis (PubMed:19502560). Isoform 2. Seems to be proteolytically inactive.

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

ab247420 is the carrier-free version of ab75982.

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	HtrA2 also known as Omi or the Omi protein is a serine protease with a molecular mass of approximately 50 kDa. It is a mitochondrial protein and commonly found in the cytosol following cellular stress. HtrA2/Omi mediates its function through its protease and pro-apoptotic activities. It is involved in the degradation of damaged proteins and exerts an important role in maintaining protein quality control within mitochondria. Researchers often study HtrA2/Omi for its function in apoptosis and Parkinson's disease-related pathways.
Biological function summary	The degradation and signaling processes of HtrA2/Omi protect against proteotoxic stress. It operates within the mitochondria and under stress conditions relocates to the cytosol where it can influence apoptosis. HtrA2/Omi can interact with inhibitors of apoptosis proteins (IAPs) and by doing this promotes apoptosis when necessary. This regulation of cell death links HtrA2/Omi to the cellular quality control mechanisms directly impacting cell survival and health.
Pathways	HtrA2/Omi integrates into the mitochondrial apoptosis pathway and is important in Parkinson's disease pathways. Through its interactions with apoptosis regulators like XIAP HtrA2/Omi facilitates the removal of unwanted cells. Additionally it participates in signaling pathways involving caspases and other pro-apoptotic factors. Its activity ensures proper communication and response within these pathways to maintain cellular balance and respond to stressors or damage.
Associated diseases and disorders	HtrA2/Omi links to neurodegenerative conditions such as Parkinson's disease and Huntington's disease. Mutations or alterations in expression levels can contribute to these conditions by disrupting normal apoptotic signaling. Other proteins like PINK1 and Parkin are closely related to HtrA2/Omi in the context of Parkinson's disease where they collectively regulate mitochondrial function and health. In such disorders the malfunction of HtrA2/Omi or its interactions leads to impaired cell survival and increased susceptibility to neuronal damage.

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.

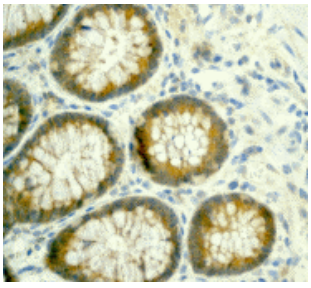
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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3 product images

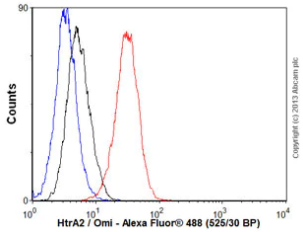


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HtrA2 / Omi antibody [EPR22] - BSA and Azide free (ab247420)

HtrA2 / Omi Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-HtrA2 / Omi antibody

This data was developed using ab75982, the same antibody clone in a different buffer formulation. Immunohistochemical analysis of paraffin-embedded human colon using ab75982 at 1/100-1/250 dilution.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

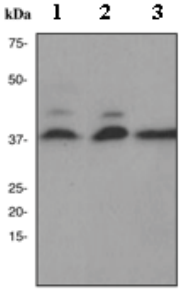


Flow Cytometry (Intracellular) - Anti-HtrA2 / Omi antibody [EPR22] - BSA and Azide free (ab247420)

HtrA2 / Omi Flow Cytometry (Intracellular) staining using rabbit Anti-HtrA2 / Omi antibody

This data was developed using ab75982, the same antibody clone in a different buffer formulation.

Overlay histogram showing HeLa cells stained with ab75982 (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 (ab75982, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was goat anti-rabbit Alexa Fluor® 488 (IgG H+L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (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.



Western blot - Anti-HtrA2 / Omi antibody [EPR22] - BSA and Azide free (ab247420)

This data was developed using ab75982, the same antibody clone in a different buffer formulation. Secondary antibody - goat anti-rabbit HRP (ab6721).

All lanes:
Western blot - Anti-HtrA2 / Omi antibody [EPR22] (ab75982) at 1/5000 dilution

Lane 1:
Jurkat cell lysate at 10 µg

Lane 2:
293T cell lysate at 10 µg

Lane 3:
HeLa cell lysate at 10 µg

Secondary

All lanes:
HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 49 kDa

Observed band size: 38 kDa, 43 kDa

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