abcam

ab109507

Anti-UBE2M/UBC12 antibody [EPR5333]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.05% Sodium azide Constituents: 50% Tissue culture supernatant, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 0.1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR5333
Purification technique	Affinity purification Protein A
Concentration	0.601 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/10000 - 1/50000
Notes	-

Expected

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

ICC/IF

Tested

Species	Human
Dilution info	1/250
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100 - 1/1000
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information UBE2M

Function	Accepts the ubiquitin-like protein NEDD8 from the UBA3-NAE1 E1 complex and catalyzes its covalent attachment to other proteins. The specific interaction with the E3 ubiquitin ligase RBX1, but not RBX2, suggests that the RBX1-UBE2M complex neddylates specific target proteins, such as CUL1, CUL2, CUL3 and CUL4. Involved in cell proliferation.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Stable for 12 months at -20°C

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	UBE2M also called UBC12 is an E2 enzyme involved in the process of neddylation which is a type of ubiquitin-like modification. The protein has a molecular mass of approximately 22 kDa. It activates and transfers NEDD8 a ubiquitin-like protein to specific substrates. UBE2M is expressed in various tissues with high expression levels in the liver muscle and kidney tissues. Its precise mechanical role is connecting to NEDD8 and collaborating with E3 ligases to modify substrates.
Biological function summary	E2 conjugating enzyme such as UBE2M functions in the regulation of the cell cycle signal transduction and other cellular processes. It is important in the neddylation pathway where it facilitates the covalent attachment of the NEDD8 molecule to Cullin proteins. UBE2M associates with the cullin-RING ligase complex assisting in the alteration of protein stability and function within cells. The proper operation of this enzyme is essential for maintaining cellular homeostasis.
Pathways	Neddylation modulates ubiquitination and acts as a regulator in protein degradation pathways. UBE2M occupies a central role in the neddylation pathway which intersects with the ubiquitin-proteasome system involving proteins like Cullin and NEDD8. Both neddylation and ubiquitination pathways share overlapping components and functions making UBE2M critical in selective protein degradation impacting processes such as DNA replication and repair and response to stress.
Associated diseases and disorders	The incorrect function of UBE2M has links to cancer and neurodegenerative diseases. In cancer misregulation of the neddylation pathway can lead to unregulated cell growth and survival due to the aberrant degradation of key proteins. Abnormal UBE2M activity impacts the regulation of the tumor suppressor protein p53 through interaction with other neddylation-related proteins affecting cell cycle control. In neurodegenerative diseases alterations in protein homeostasis and aggregation occur related to the dysregulation of neddylation influencing proteins involved in neuronal function.

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.

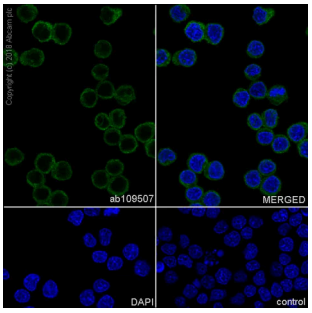
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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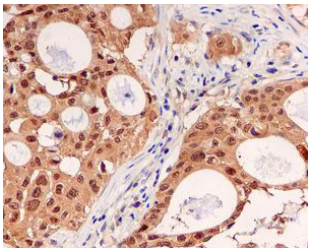
5 product images



Immunocytochemistry/ Immunofluorescence - Anti-UBE2M/UBC12 antibody [EPR5333] (ab109507)

UBE2M/UBC12 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-UBE2M/UBC12 antibody

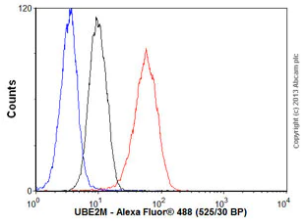
Immunocytochemistry/ Immunofluorescence analysis of Ramos (human Burkitt's lymphoma B lymphocyte) cells labeling UBE2M/UBC12 with purified ab109507 at 1/250 dilution (8 µg/mL). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/mL) dilution. DAPI (blue) was used as nuclear counterstain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UBE2M/UBC12 antibody [EPR5333] (ab109507)

UBE2M/UBC12 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-UBE2M/UBC12 antibody

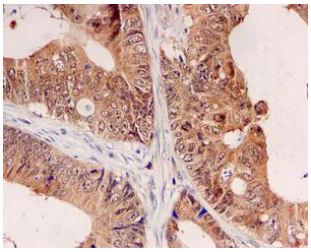
Immunohistochemical analysis of paraffin-embedded Human lung carcinoma tissue using ab109507 at a dilution of 1/100.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-UBE2M/UBC12 antibody [EPR5333] (ab109507)

UBE2M/UBC12 Flow Cytometry (Intracellular) staining using rabbit Anti-UBE2M/UBC12 antibody

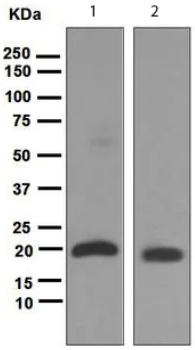
Overlay histogram showing Ramos cells stained with ab109507 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab109507, 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 Ramos cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UBE2M/UBC12 antibody [EPR5333] (ab109507)

UBE2M/UBC12 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-UBE2M/UBC12 antibody

Immunohistochemical analysis of paraffin-embedded human colonic adenocarcinoma tissue using ab109507 at a dilution of 1/100.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-UBE2M/UBC12 antibody [EPR5333] (ab109507)

All lanes:
Western blot - Anti-UBE2M/UBC12 antibody [EPR5333] (ab109507) at 1/10000 dilution

Lane 1:
HEK-293T cell lysate at 10 µg

Lane 2:
Ramos cell lysate at 10 µg

Predicted band size: 21 kDa

Observed band size: 20 kDa

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