abcam

ab75854

Anti-UBE2I / UBC9 antibody [EP2938Y]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EP2938Y
Purification technique	Affinity purification Protein A
Concentration	0.454 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	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/2000
Notes	-

Species	Rat
Dilution info	1/2000
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Mouse
Dilution info	1/1000

Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

Target data

See full target information UBE2I

Function	Accepts the ubiquitin-like proteins SUMO1, SUMO2, SUMO3, SUMO4 and SUMO1P1/SUMO5 from the UBLE1A-UBLE1B E1 complex and catalyzes their covalent attachment to other proteins with the help of an E3 ligase such as

RANBP2, CBX4 and ZNF451. Can catalyze the formation of poly-SUMO chains. Necessary for sumoylation of FOXL2 and KAT5. Essential for nuclear architecture and chromosome segregation. Sumoylates p53/TP53 at 'Lys-386'. Mediates sumoylation of ERCC6 which is essential for its transcription-coupled nucleotide excision repair activity (PubMed:26620705). Sumoylates SHMT1 at 'Lys-38' or 'Lys-39' leading to RAN-dependent nuclear import of SHMT1 (PubMed:17446168). Also sumoylates TYMS and DHFR (PubMed:18067453).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
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	UBE2I also known as UBC9 is a small ubiquitin-related modifier (SUMO) conjugating enzyme. It plays an important role in the SUMOylation process which modifies proteins by attaching sumo proteins to them altering their function. This

	protein has a molecular mass of approximately 18 kDa. UBE2I is expressed broadly across various tissues demonstrating its significance in cellular processes.
Biological function summary	The SUMO conjugating enzyme UBE2I is part of the SUMOylation complex which includes the SUMO E1 enzyme and SUMO E3 ligase. It facilitates the attachment of SUMO proteins to target proteins which can influence protein stability localization and interaction with other proteins. This modification usually regulates important cellular functions such as transcription DNA repair and cell cycle progression.
Pathways	Proteins modified by UBE2I participate in significant biological pathways such as the DNA damage response and cell cycle regulation. In the DNA damage response UBE2I works with proteins such as p53 and BRCA1 to maintain genomic stability. In cell cycle pathways interactions with proteins like cyclin D1 and CDK inhibitors help control cellular proliferation by SUMOylating key regulatory proteins.
Associated diseases and disorders	UBE2I has been implicated in cancer and neurodegenerative diseases. Altered SUMOylation by UBE2I can lead to the dysfunction of tumor suppressor proteins like p53 contributing to cancer development. In neurodegenerative diseases abnormal SUMOylation might affect proteins like tau which can lead to the progression of conditions such as Alzheimer's disease. The role of UBE2I in these disorders highlights it as a potential therapeutic target in addressing these conditions.

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

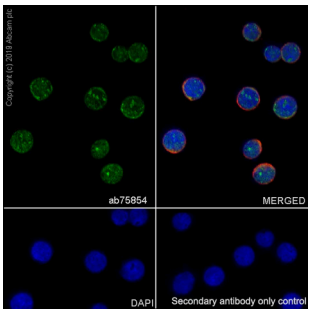
We do not recommend this combination. It is not covered by our product promise.

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.

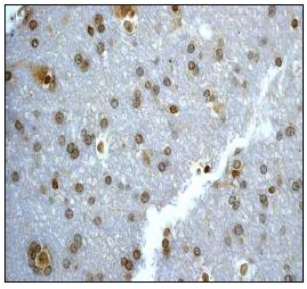
11 product images



Immunocytochemistry/ Immunofluorescence - Anti-UBE2I / UBC9 antibody [EP2938Y] (ab75854)

UBE2I / UBC9 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-UBE2I / UBC9 antibody

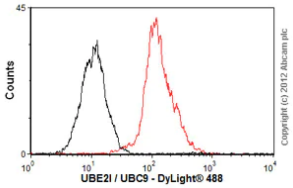
Immunocytochemistry/ Immunofluorescence analysis of Jurkat (human T cell leukemia T lymphocyte) cells labeling UBE2I / UBC9 with purified ab75854 at 1/100 dilution (10 µg/mL). Cells were fixed in 100% Methanol. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (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-UBE2I / UBC9 antibody [EP2938Y] (ab75854)

UBE2I / UBC9 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-UBE2I / UBC9 antibody

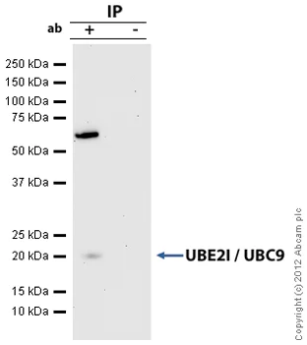
ab75854, at 1/100 dilution, staining UBE2I / UBC9 in human brain, by Immunohistochemistry using formalin-fixed, paraffin-embedded tissue.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-UBE2I / UBC9 antibody [EP2938Y] (ab75854)

UBE2I / UBC9 Flow Cytometry (Intracellular) staining using rabbit Anti-UBE2I / UBC9 antibody

Overlay histogram showing HepG2 cells stained with ab75854 (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 (ab75854, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1/500 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. Acquisition of >5,000 events was performed.

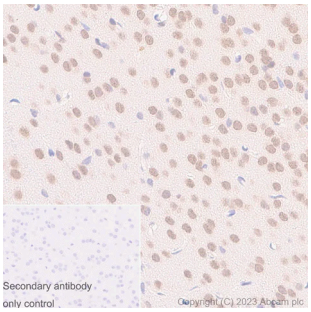


Immunoprecipitation - Anti-UBE2I / UBC9 antibody [EP2938Y] (ab75854)

UBE2I / UBC9 was immunoprecipitated using 0.5mg Jurkat whole cell extract, 5µg of Rabbit polyclonal to UBE2I / UBC9 and 50µl of protein G magnetic beads (+). No antibody was added to the control (-).
The antibody was incubated under agitation with Protein G beads for 10min, Jurkat whole cell extract lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation.
Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70°C; 10µl

of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab75854.
Secondary: Clean blot (HRP conjugate) at 1/1000 dilution.
Band: 18kDa: UBE2I / UBC9; non specific - 60kDa: We are unsure as to the identity of this extra band.
All lanes:
Immunoprecipitation - Anti-UBE2I / UBC9 antibody [EP2938Y] (ab75854)

Predicted band size: 18 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UBE2I / UBC9 antibody [EP2938Y] (ab75854)

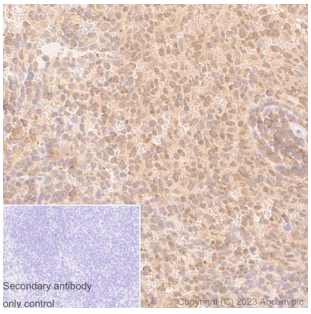
Immunohistochemical analysis of paraffin-embedded Mouse cerebrum labelling UBE2I / UBC9 with ab75854 at 1/2000 (0.227 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Nuclear staining on the mouse cerebrum
The section was incubated with ab75854 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UBE2I / UBC9 antibody [EP2938Y] (ab75854)

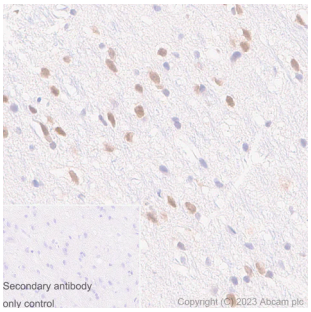
Immunohistochemical analysis of paraffin-embedded Rat spleen labelling UBE2I / UBC9 with ab75854 at 1/2000 (0.227 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on the Rat spleen
The section was incubated with ab75854 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UBE2I / UBC9 antibody [EP2938Y] (ab75854)

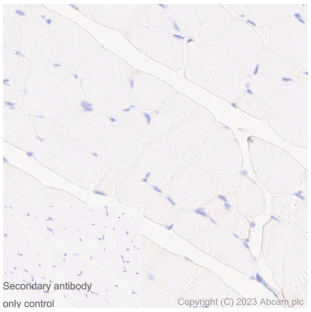
Immunohistochemical analysis of paraffin-embedded Rat cerebrum labelling UBE2I / UBC9 with ab75854 at 1/2000 (0.227 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Nuclear staining on the Rat cerebrum
The section was incubated with ab75854 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UBE2I / UBC9 antibody [EP2938Y] (ab75854)

Immunohistochemical analysis of paraffin-embedded Mouse skeletal mucle with ab75854 at 1/2000 (0.227 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Low expression tissue: Negligible staining on Mouse skeletal muscle.

The section was incubated with aab75854 for 30 mins at room temperature.

The immunostaining was performed on a Leica Biosystems BOND RX instrument.

Counterstained with Hematoxylin.

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UBE2I / UBC9 antibody [EP2938Y] (ab75854)

UBE2I / UBC9 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Low expression tissue: Negligible staining on Rat skeletal muscle. using rabbit Anti-UBE2I / UBC9 antibody

Immunohistochemical analysis of paraffin-embedded Rat skeletal mucle with ab75854 at 1/2000 (0.227 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

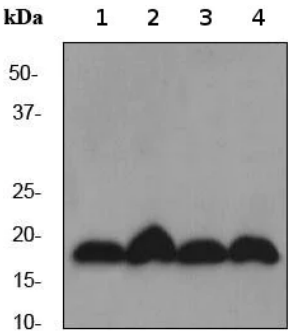
Low expression tissue: Negligible staining on Rat skeletal muscle.

The section was incubated with aab75854 for 30 mins at room temperature.

The immunostaining was performed on a Leica Biosystems BOND RX instrument.

Counterstained with Hematoxylin.

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins.



Western blot - Anti-UBE2I / UBC9 antibody [EP2938Y] (ab75854)

All lanes:
Western blot - Anti-UBE2I / UBC9 antibody [EP2938Y] (ab75854) at 1/10000 dilution

Lane 1:
U937 cell lysate at 10 µg

Lane 2:
HeLa cell lysate at 10 µg

Lane 3:
Jurkat cell lysate at 10 µg

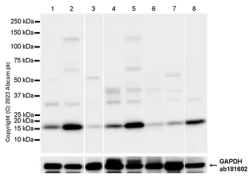
Lane 4:
HUVEC cell lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP at 1/1000 dilution

Predicted band size: 18 kDa

Observed band size: 18 kDa



Western blot - Anti-UBE2I / UBC9 antibody [EP2938Y] (ab75854)

Diluting and blocking buffer: 5% NFDM/TBST 5% NFDM/TBST

Low expression control: mouse skeletal muscle, rat parathyroid. rat skeletal muscle.

In Western blot, anti-GAPDH antibody (ab181602) loading control staining at 1/200000 dilution.

All lanes:
Western blot - Anti-UBE2I / UBC9 antibody [EP2938Y] (ab75854) at 1/1000 dilution

Lane 1:
Mouse brain tissue lysate at 20 µg

Lane 2:
Mouse spleen tissue lysate at 20 µg

Lane 3:
Mouse skeletal muscle tissue lysate at 20 µg

Lane 4:
Rat brain tissue lysate at 20 µg

Lane 5:
Rat spleen tissue lysate at 20 µg

Lane 6:
Rat parathyroid tissue lysate at 20 µg

Lane 7:
Rat skeletal muscle tissue lysate at 20 µg

Lane 8:
U-937 (human histiocytic lymphoma monocyte) whole cell lysate at 20 µg

Secondary

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

Predicted band size: 18 kDa

Observed band size: 18 kDa

Exposure time: 3s

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