abcam

ab313628

Anti-TRIP12/ULF antibody [EPR27062-86]

Anti-TRIP12/ULF antibody [EPR27062-86] is a Rabbit Monoclonal antibody that is used in TRIP12/ULF Flow Cytometry (Intra), ICC/IF, IHC-P, Western Blot. Suitable for Human, Mouse, Rat samples.

Thyroid hormone receptor interactor 12 (TRIP12) is an E3 ligase most notably involved in the proteolytic degradation of the tumor suppressors p14ARF and p19ARF. TRIP12 responds to DNA damage and oncogenic stress by targeting RNF168 and p19ARF for proteolysis. TRIP12 inactivation causes FBW7 protein accumulation and increased proteasomal degradation of the SCFFBW7 substrate Myeloid Leukemia 1 (MCL1), and sensitizes cancer cells to anti-tubulin chemotherapy. Conversely, TRIP12 is associated with distant metastasis-free survival in breast cancer, suggesting an inhibitory role in metastasis.

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	EPR27062-86
Purification technique	Affinity purification Protein A
Concentration	0.491 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	-

Species	Mouse
Dilution info	1/50
Notes	-

Expected

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

WB

Tested

Species	Human
Dilution info	1/1000
Notes	Please use freshly made lysate in Western blot to minimize protein degradation.

Species	Mouse
Dilution info	1/1000
Notes	Please use freshly made lysate in Western blot to minimize protein degradation.

Species	Rat
Dilution info	1/1000
Notes	Please use freshly made lysate in Western blot to minimize protein degradation.

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Species	Mouse
Dilution info	1/50
Notes	-

Expected

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

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-

Notes	-

Target data

See full target information TRIP12

Function	E3 ubiquitin-protein ligase involved in ubiquitin fusion degradation (UFD) pathway and regulation of DNA repair (PubMed:19028681, PubMed:22884692, PubMed:40419785). Part of the ubiquitin fusion degradation (UFD) pathway, a process that mediates ubiquitination of protein at their N-terminus, regardless of the presence of lysine residues in target proteins (PubMed:19028681). Acts as a key regulator of DNA damage response by acting as a suppressor of RNF168, an E3 ubiquitin-protein ligase that promotes accumulation of 'Lys-63'-linked histone H2A and H2AX at DNA damage sites, thereby acting as a guard against excessive spreading of ubiquitinated chromatin at damaged chromosomes (PubMed:22884692). In normal cells, mediates ubiquitination and degradation of isoform p19ARF/ARF of CDKN2A, a lysine-less tumor suppressor required for p53/TP53 activation under oncogenic stress (PubMed:20208519). In cancer cells, however, isoform p19ARF/ARF and TRIP12 are located in different cell compartments, preventing isoform p19ARF/ARF ubiquitination and degradation (PubMed:20208519). Does not mediate ubiquitination of isoform p16-INK4a of CDKN2A (PubMed:20208519). Also catalyzes ubiquitination of NAE1 and SMARCE1, leading to their degradation (PubMed:18627766). Ubiquitination and degradation of target proteins is regulated by interaction with proteins such as MYC, TRADD or SMARCC1, which disrupt the interaction between TRIP12 and target proteins (PubMed:20829358). Mediates ubiquitination of ASXL1: following binding to N(6)-methyladenosine methylated DNA, ASXL1 is ubiquitinated by TRIP12, leading to its degradation and subsequent inactivation of the PR-DUB complex (PubMed:30982744).

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	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	TRIP12 also known as Thyroid Hormone Receptor Interactor 12 or ULF (Ubiquitin Ligase for FBW7) is an E3 ubiquitin ligase. Mechanically TRIP12 facilitates the ubiquitination and subsequent proteasomal degradation of specific proteins. It has an approximate mass of 220 kDa. This protein is expressed in various tissues including the brain and liver. TRIP12 often interacts with other proteins through its ARM and HECT domains playing an important role in regulating protein stability.
Biological function summary	TRIP12 functions as a regulator of protein turnover impacting processes such as cell cycle progression and DNA damage responses. It is not part of a larger complex but operates independently to exert its influence. The target specifically targets proteins like p53 and FBW7 for degradation allowing cells to maintain homeostasis and adapt to changing conditions. This regulation ensures cells respond appropriately to DNA damage by either promoting repair pathways or facilitating apoptosis when repair is not feasible.
Pathways	TRIP12 plays a role in the ubiquitin-proteasome system and the p53 signaling pathway. In the ubiquitin-proteasome system TRIP12 works alongside other E3 ligases to regulate protein degradation ensuring proteins that are damaged or no longer needed are efficiently removed. Within the p53 signaling pathway TRIP12 influences the stability and activity of the tumor suppressor protein p53 helping control cell cycle arrest and apoptosis. TRIP12's relationship with FBW7 further connects it to pathways involved in cancer as FBW7 targets many oncoproteins.
Associated diseases and disorders	TRIP12 has links to cancer and neurodevelopmental disorders. Alterations in the activity or expression of TRIP12 can lead to the accumulation of proteins like p53 which may contribute to tumorigenesis. Mutations in TRIP12 have also been associated with neurodevelopmental disorders where disrupted protein turnover impacts neural development. Its interaction with proteins such as p53 and FBW7 highlights its potential role in disease mechanisms making it a target of interest for therapeutic intervention.

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.

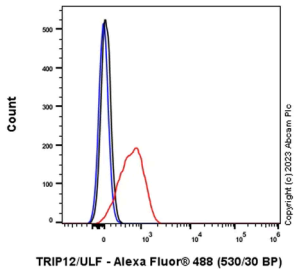
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

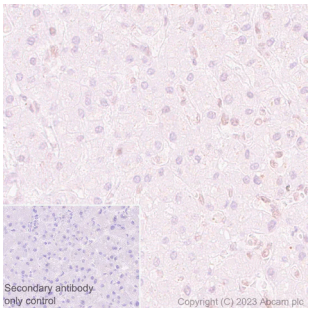
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14 product images



Flow Cytometry (Intracellular) - Anti-TRIP12/ULF antibody [EPR27062-86] (ab313628)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HeLa (human cervical adenocarcinoma epithelial cell) cells labelling TRIP12/ULF with ab313628 at 1/50 dilution (1ug) (Red) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

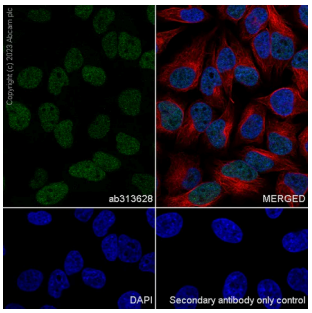


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TRIP12/ULF antibody [EPR27062-86] (ab313628)

TRIP12/ULF Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human liver using rabbit Anti-TRIP12/ULF antibody

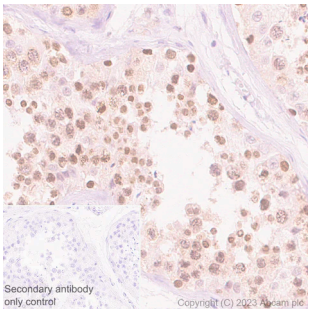
Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling TRIP12/ULF with ab313628 at 1/2000 (0.246 ug/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer) (ab214880). Low expression: weakly nuclear staining on human liver. The section was incubated with ab313628 at 4°C overnight. Counterstained with Hematoxylin. Secondary antibody

only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer) (ab214880). Heat mediated antigen retrieval was performed using ab93678 (citrate buffer, pH 6.0)



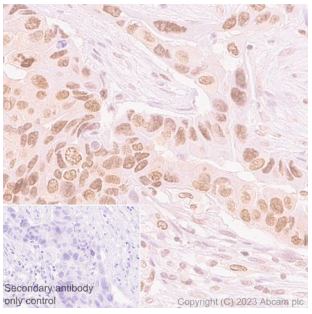
Immunocytochemistry/ Immunofluorescence - Anti-TRIP12/ULF antibody [EPR27062-86] (ab313628)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HeLa (human cervical adenocarcinoma epithelial cell) cells labelling TRIP12/ULF with ab313628 at 1/50 (9.82 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/ml dilution (Green). Confocal image showing nuclear staining in HeLa cell line. Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8). is observed. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/ml dilution.



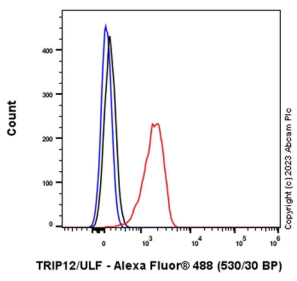
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Immunohistochemical analysis of paraffin-embedded Human testis tissue labeling TRIP12/ULF with ab313628 at 1/2000 (0.246 ug/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer) (ab214880). Nuclear staining on human testis. The section was incubated with ab313628 at 4°C overnight. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer) (ab214880). Heat mediated antigen retrieval was performed using ab93678 (citrate buffer, pH 6.0)



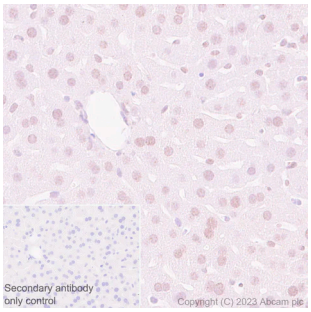
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TRIP12/ULF antibody [EPR27062-86] (ab313628)

Immunohistochemical analysis of paraffin-embedded Human lung cancer tissue labeling TRIP12/ULF with ab313628 at 1/2000 (0.246 ug/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer) (ab214880). Nuclear staining on human lung cancer. The section was incubated with ab313628 at 4°C overnight. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer) (ab214880). Heat mediated antigen retrieval was performed using ab93678 (citrate buffer, pH 6.0)



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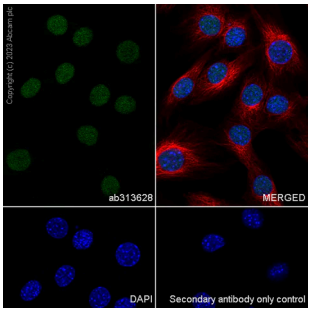
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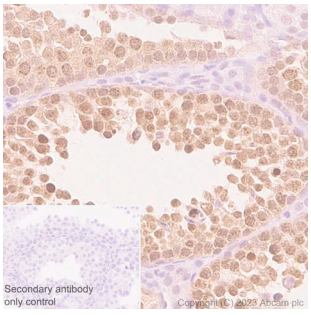
TRIP12/ULF Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse liver using rabbit Anti-TRIP12/ULF antibody

Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling TRIP12/ULF with ab313628 at 1/2000 (0.246 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Low expression: weakly nuclear staining on mouse liver. The section was incubated with ab313628 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 Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins



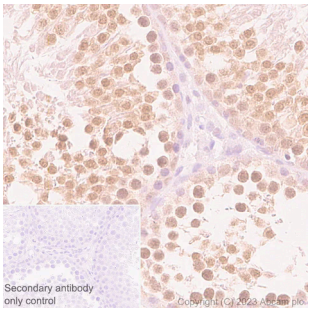
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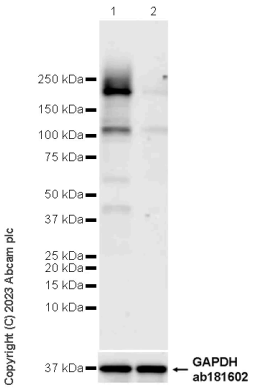
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TRIP12/ULF antibody [EPR27062-86] (ab313628)

Immunohistochemical analysis of paraffin-embedded Mouse testis tissue labeling TRIP12/ULF with ab313628 at 1/2000 (0.246 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining on mouse testis (PMID: 23663701). The section was incubated with ab313628 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 Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). 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-TRIP12/ULF antibody [EPR27062-86] (ab313628)

Immunohistochemical analysis of paraffin-embedded Rat testis tissue labeling TRIP12/ULF with ab313628 at 1/2000 (0.246 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining on rat testis. The section was incubated with ab313628 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 Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins



Western blot - Anti-TRIP12/ULF antibody [EPR27062-86] (ab313628)

Blocking and diluting buffer and concentration: 5% NFDM/TBST Lysates were freshly made and used for Western blotting immediately to minimize protein degradation. In Western blot, anti-GAPDH antibody (ab181602) loading control staining at 1/200000 dilution. Exposure time: 59 seconds
All lanes:
Western blot - Anti-TRIP12/ULF antibody [EPR27062-86] (ab313628) at 1/1000 dilution

Lane 1:
HeLa (human cervical adenocarcinoma epithelial cell) transfected with scrambled siRNA control whole cell lysate at 20 µg

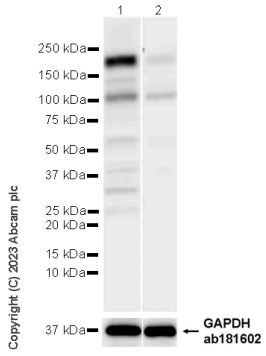
Lane 2:
Hela transfected with siRNA specifically targeti TRIP12/ULF whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 220 kDa

Exposure time: 59s



Western blot - Anti-TRIP12/ULF antibody [EPR27062-86] (ab313628)

Blocking and diluting buffer and concentration: 5% NFDM/TBST Low expression: Kidney (PMID: 23663701). The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 23663701). In Western blot, anti-GAPDH antibody (ab181602) loading control staining at 1/200000 dilution. Exposure time: 59 seconds
All lanes:
Western blot - Anti-TRIP12/ULF antibody [EPR27062-86] (ab313628) at 1/1000 dilution

Lane 1:
Human testis tissue lysate at 20 µg

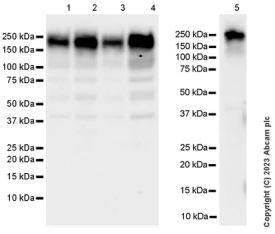
Lane 2:
Human kidney tissue lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Observed band size: 220 kDa

Exposure time: 59s



Western blot - Anti-TRIP12/ULF antibody [EPR27062-86] (ab313628)

TRIP12/ULF Western blot staining using rabbit Anti-TRIP12/ULF antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST Lysates were freshly made and used for Western blotting immediately to minimize protein degradation. Exposure time: 48 seconds
All lanes:

Western blot - Anti-TRIP12/ULF antibody [EPR27062-86] (ab313628) at 1/1000 dilution

Lane 1:
HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
293T (human embryonic kidney epithelial cell) whole cell lysate at 20 µg

Lane 3:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 20 µg

Lane 4:
PC-12 (rat adrenal gland pheochromocytoma cell) whole cell lysate at 20 µg

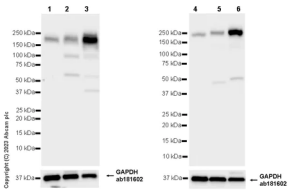
Lane 5:
C2C12 (mouse myoblast) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 220 kDa

Exposure time: 48s



Western blot - Anti-TRIP12/ULF antibody [EPR27062-86] (ab313628)

Blocking and diluting buffer and concentration: 5% NFDM/TBST Low expression: brain, liver (PMID: 23663701). The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 23663701). Lysates were freshly made and used for Western blotting immediately to minimize protein degradation. In Western blot, anti-GAPDH antibody (ab181602) loading control staining at 1/200000 dilution. Exposure time: 15 seconds
All lanes:
Western blot - Anti-TRIP12/ULF antibody [EPR27062-86] (ab313628) at 1/1000 dilution

Lane 1:
Mouse brain tissue lysate at 20 µg

Lane 2:
Mouse liver tissue lysate at 20 µg

Lane 3:
Mouse testis tissue lysate at 20 µg

Lane 4:
Rat brain tissue lysate at 20 µg

Lane 5:
Rat liver tissue lysate at 20 µg

Lane 6:
Rat testis tissue lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Observed band size: 220 kDa

Exposure time: 15s

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