abcam

ab270398

Anti-PELP1 antibody [EPR22863-99]

Recombinant | RabMAb

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	EPR22863-99
Purification technique	Affinity purification Protein A
Concentration	0.446 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information PELP1

Function	Coactivator of estrogen receptor-mediated transcription and a corepressor of other nuclear hormone receptors and sequence-specific transcription factors (PubMed:14963108). Plays a role in estrogen receptor (ER) genomic activity when present in the nuclear compartment by activating the ER target genes in a hormonal stimulation dependent manner. Can facilitate ER non-genomic signaling via SRC and PI3K interaction in the cytosol. Plays a role in E2-mediated cell cycle progression by interacting with RB1. May have important functional implications in ER/growth factor cross-talk. Interacts with several growth factor signaling components including EGFR and HRS. Functions as the key stabilizing component of the Five Friends of Methylated CHTOP (5FMC) complex; the 5FMC complex is recruited to ZNF148 by methylated CHTOP, leading to desumoylation of ZNF148 and subsequent transactivation of ZNF148 target genes. Component of the PELP1 complex involved in the nucleolar steps of 28S rRNA maturation and the subsequent nucleoplasmic transit of the pre-60S ribosomal subunit. Regulates pre-60S association of the critical remodeling factor MDN1 (PubMed:21326211). May promote tumorigenesis via its interaction with and modulation of several oncogenes including SRC, PI3K, STAT3 and EGFR. Plays a role in cancer cell metastasis via its ability to modulate E2-mediated cytoskeleton changes and cell migration via its interaction with SRC and PI3K.

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	The Proline Glutamic acid and Leucine-rich Protein 1 (PELP1) also known as Modulator of Nongenomic Activity of Estrogen Receptor (MNAR) plays a significant role in chromatin remodeling and transcriptional regulation. PELP1 has a molecular mass of approximately 160 kDa. It is broadly expressed in various tissues with particularly high levels in reproductive tissues and the brain. PELP1 participates in the recruitment of histone-modifying enzymes and acts as a scaffolding protein that interacts with several nuclear receptors and transcription factors.
Biological function summary	PELP1 acts within the nucleus and is central to gene expression regulation. It is an integral part of diverse protein complexes that engage in remodeling chromatin and modifying transcriptional activity. PELP1 interacts with estrogen receptors where it modulates both genomic and non-genomic signaling pathways affecting gene expression programs related to cell growth and differentiation. Additionally PELP1 associates with various other hormone receptors and transcription factors assisting in the intricate regulation of cell functions.
Pathways	Cellular growth and differentiation rely on the signaling roles that PELP1 performs. PELP1 is involved in the estrogen signaling pathway where it closely interacts with estrogen receptor alpha (ERα). This interaction links estrogen signaling to the cell cycle machinery and PI3K/AKT pathway influencing cell proliferation and survival. Another pathway in which PELP1 plays a critical role is the MAPK/ERK pathway

where it cooperates with Src kinase highlighting its importance in cell signaling networks that regulate growth and differentiation.

Associated diseases and disorders

PELP1 holds a strong association with hormone-driven cancers particularly breast and prostate cancers. In these contexts PELP1's interaction with estrogen and androgen receptors can dramatically alter tumor progression suggesting its role as an oncogene. Additionally aberrant expression and activity of PELP1 have implications in neurological disorders. In breast cancer PELP1 collaborates with ERα to drive estrogen-mediated growth whereas in prostate cancer it engages with androgen receptor (AR) promoting cell proliferation and resistance to therapy.

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

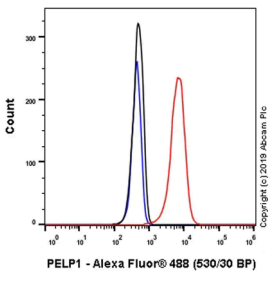
We do not recommend this combination. It is not covered by our product promise.

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.

7 product images

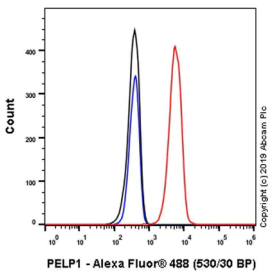


Flow Cytometry (Intracellular) - Anti-PELP1 antibody [EPR22863-99] (ab270398)

PELP1 Flow Cytometry (Intracellular) staining using rabbit Anti-PELP1 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized MCF7 (Human breast adenocarcinoma epithelial cell) cells labelling PELP1 with ab270398 at 1/500 (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary

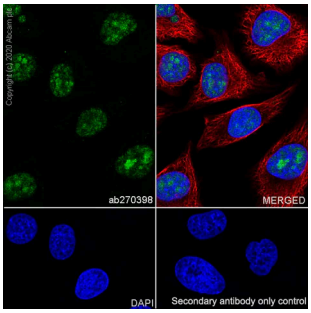
antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.



Flow Cytometry (Intracellular) - Anti-PELP1 antibody [EPR22863-99] (ab270398)

PELP1 Flow Cytometry (Intracellular) staining using rabbit Anti-PELP1 antibody

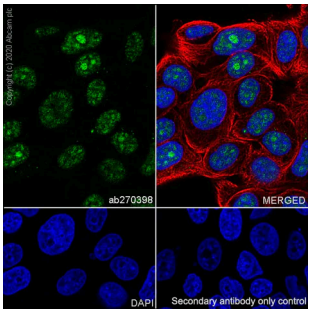
Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized HeLa (Human cervix adenocarcinoma epithelial cell) cells labelling PELP1 with ab270398 at 1/500 (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-PELP1 antibody [EPR22863-99] (ab270398)

PELP1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PELP1 antibody

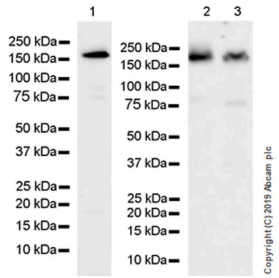
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa cells labelling PELP1 with ab270398 at 1/50 dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing nuclear staining in HeLa cells. ab195889 Anti-alpha Tubulin antibody (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-PELP1 antibody [EPR22863-99] (ab270398)

PELP1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PELP1 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized MCF7 cells labelling PELP1 with ab270398 at 1/50 dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing nuclear staining in MCF7 cells. ab195889 Anti-alpha Tubulin antibody (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.



Western blot - Anti-PELP1 antibody [EPR22863-99] (ab270398)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
The expression profile observed is consistent with what has been described in the literature (PMID: 27045366, 11481323).

Exposure time: Lane 1: 59 seconds; Lanes 2-3: 70 seconds.

All lanes:

Western blot - Anti-PELP1 antibody [EPR22863-99] (ab270398) at 1/1000 dilution

Lane 1:
MCF7 (human breast adenocarcinoma epithelial cell), whole cell lysate at 20 µg

Lane 2:
SW620 (human colorectal adenocarcinoma epithelial cell), whole cell lysate at 20 µg

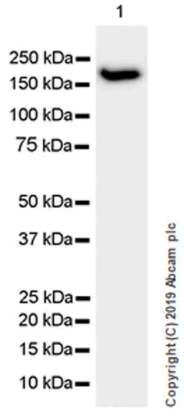
Lane 3:
HeLa (human cervix adenocarcinoma epithelial cell), whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

Predicted band size: 120 kDa

Observed band size: 160 kDa



Western blot - Anti-PELP1 antibody [EPR22863-99] (ab270398)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
The expression profile observed is consistent with what has been described in the literature (PMID: 27045366, 11481323).

Exposure time: 37 seconds.

All lanes:
Western blot - Anti-PELP1 antibody [EPR22863-99] (ab270398) at 1/1000 dilution

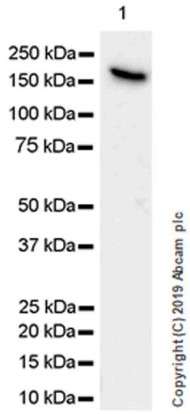
All lanes:
HEK-293 (human embryonic kidney epithelial cell), whole cell lysate at 20 µg

Secondary

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

Predicted band size: 120 kDa

Observed band size: 160 kDa



Western blot - Anti-PELP1 antibody [EPR22863-99] (ab270398)

PELP1 Western blot staining of Human testis tissue lysate using rabbit Anti-PELP1 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
The expression profile observed is consistent with what has been described in the literature (PMID: 27045366, 11481323).

Exposure time: 3 minutes.

All lanes:
Western blot - Anti-PELP1 antibody [EPR22863-99] (ab270398) at 1/1000 dilution

All lanes:
Human testis tissue lysate at 20 µg

Secondary

All lanes:
Western blot - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/1000 dilution

Predicted band size: 120 kDa

Observed band size: 160 kDa

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