

Anti-GAPDH antibody [EPR16891] - Loading Control

Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) is a rabbit monoclonal antibody detecting GAPDH in **Western Blot, Flow Cytometry (Intra), IP, IHC-P, ICC/IF**. Suitable for **African green monkey, Chicken, Human, Mouse, Rat, Xenopus tropicalis, Zebrafish**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 2470 publications

Lab Essentials

Recombinant

RabMAb

20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	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	EPR16891
Purification technique	Affinity purification Protein A
Concentration	1.02 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/60
Notes	-

Expected

Species	Mouse, Rat, African green monkey, Zebrafish, Xenopus tropicalis, Chicken
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rabbit, Fish
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/10000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	African green monkey
Dilution info	1/10000
Notes	-

Species	Zebrafish
Dilution info	1/10000
Notes	-

Species	Xenopus tropicalis
Dilution info	1/10000
Notes	-

Species	Chicken
Dilution info	1/10000
Notes	-

Species	Human
Dilution info	1/10000
Notes	-

Predicted

Species	Rabbit, Fish
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/500
Notes	-

Expected

Species	Mouse, Rat, African green monkey, Zebrafish, Xenopus tropicalis, Chicken
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rabbit, Fish
Dilution info	-

Notes -

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/180
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse, Rat, African green monkey, Zebrafish, Xenopus tropicalis, Chicken
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rabbit, Fish
Dilution info	-
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
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Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
Expected	
Species	African green monkey, Zebrafish, Xenopus tropicalis, Chicken
Dilution info	Use at an assay dependent concentration.
Notes	-
Predicted	
Species	Rabbit, Fish
Dilution info	-
Notes	-

Target data

[See full target information GAPDH](#) 

Function	Catalyzes the conversion of D-glyceraldehyde 3-phosphate (G3P) into 3-phospho-D-glyceroyl phosphate in glycolysis and the reverse reaction in gluconeogenesis (PubMed:11724794, PubMed:3170585). Also shows nitrosylase activity, thereby playing a role in nuclear functions (PubMed:11724794, PubMed:3170585). Modulates the organization and assembly of the cytoskeleton (By similarity). Facilitates the CHP1-dependent microtubule and membrane associations through its ability to stimulate the binding of CHP1 to microtubules (By similarity). Component of the GAIT (gamma interferon-activated inhibitor of translation) complex which mediates interferon-gamma-induced transcript-selective translation inhibition in inflammation processes (PubMed:23071094). Upon interferon-gamma treatment assembles into the GAIT complex which binds to stem loop-containing GAIT elements in the 3'-UTR of diverse inflammatory mRNAs (such as ceruplasmin) and suppresses their translation (PubMed:23071094). Also plays a role in innate immunity by promoting TNF-induced NF-kappa-B activation and type I interferon production, via interaction with TRAF2 and TRAF3, respectively (PubMed:23332158, PubMed:27387501). Participates in nuclear events including transcription, RNA transport, DNA replication and apoptosis (By similarity). Nuclear functions are probably due to the nitrosylase activity that mediates cysteine S-nitrosylation of nuclear target proteins such as SIRT1, HDAC2 and PRKDC (By similarity).
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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

Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) was developed by Abcam using patented rabbit monoclonal antibody technology and is validated for use in Flow Cyt (Intra), ICC/IF, IHC-P, IP and WB.

Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) was first used in a scientific publication in 1987 and has been cited over 2472 times in peer reviewed journals. It's performance in Western Blot in human, mouse and rat samples is trusted by the scientific community.

Abcam's high quality manufacturing and validation processes ensure Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) has high sensitivity and specificity alongside high lot-to-lot consistency and reproducibility.

Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) has 22 independent reviews from customers.

GAPDH antibodies are often used as loading controls in Western Blot. Anti-GAPDH antibody [EPR16891] - Loading Control has been verified in Western Blot samples and detects a band at 36kDa Molecular weight.

Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) specifically detects GAPDH (UniProt ID: P16858; Molecular weight: 36kDa) and is sold in 100 µL and 1 mL selling sizes.

Conjugation-ready, carrier free format available for antibody clone EPR16891 - ab199553.

Antibody clone EPR16891 is also available pre-conjugated to a variety of labels for your convenience - Alexa Fluor® 647, Alexa Fluor® 488, HRP, Alexa Fluor® 594, Alexa Fluor® 405, PE, FITC (ab201272, ab201768, ab201822, ab206371, ab206372, ab224004, ab224005).

One of the top cited clones in the market for GAPDH with >3000 citations. GAPDH is a key target involved in glycolysis and cell metabolism. It plays a crucial role as a housekeeping gene, particularly in understanding GAPDH expression and its function as a metabolic enzyme. GAPDH is widely analysed in GAPDH activity assays and studies of its role in various cellular processes. Additionally, GAPDH is commonly used as a loading control in western blotting, IHC and immunofluorescence experiments.

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

Glyceraldehyde-3-phosphate dehydrogenase commonly known as GAPDH is an enzyme involved in glycolysis. Its molecular weight (MW) is approximately 36 kDa. The protein is expressed ubiquitously in almost all tissues reflecting its essential role in energy production. GAPDH catalyzes the sixth step of glycolysis converting glyceraldehyde-3-phosphate into 1,3-bisphosphoglycerate. Due to its stable expression researchers often use GAPDH as a loading control in western blot experiments.

Biological function summary

GAPDH serves important metabolic functions beyond its enzymatic role in glycolysis. It functions as part of a multi-enzyme complex within the cytoplasm which facilitates efficient substrate channeling during glycolysis. Additionally GAPDH has non-glycolytic roles including involvement in nuclear processes like RNA export and DNA repair. Its ubiquitous presence across different cellular compartments indicates its multiple functions beyond metabolic pathways.

Pathways

GAPDH integrates into significant cellular functions like the glycolytic pathway and apoptotic pathways. In glycolysis GAPDH collaborates with enzymes like phosphoglycerate kinase forming a cohesive link in the energy conversion chain. Its participation in apoptotic pathways highlights GAPDH's involvement in cellular death processes interacting with proteins like Bcl-2 to influence apoptosis progression. These roles reinforce its presence in central metabolic and regulatory pathways.

Associated diseases and disorders

GAPDH has associations with neurodegenerative diseases and cancer. In neurodegenerative disorders such as Alzheimer's disease GAPDH's altered enzymatic activity is frequently observed influencing cellular energy homeostasis. Moreover overexpression or aberrant regulation of GAPDH relates to cancer cell proliferation and metastasis implicating proteins like p53 in these pathways. The diverse functions and interactions of GAPDH emphasize its importance in both normal cellular function and disease states.

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

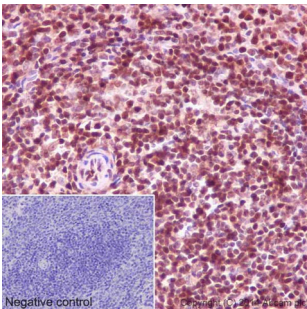
We do not recommend this combination. It is not covered by our product promise.

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.

41 product images



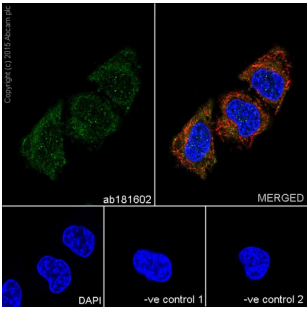
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

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

Immunohistochemical analysis of paraffin-embedded rat spleen tissue labeling GAPDH with ab181602 at 1/2000 dilution, followed by prediluted HRP Polymer for Rabbit/Mouse IgG. Nucleus and cytoplasmic staining on lymphocyte of rat spleen is observed. Counter stained with Hematoxylin.

Negative control: Using PBS instead of primary ab, secondary ab is prediluted HRP Polymer for Rabbit/Mouse IgG.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

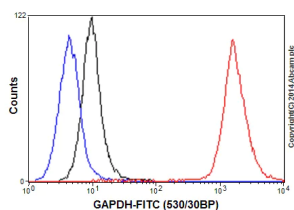


Immunocytochemistry/ Immunofluorescence - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-GAPDH antibody

Immunocytochemistry/immunofluorescence staining of 4% paraformaldehyde fixed; 0.1% triton X 100 permeabilized HeLa (human cervix adenocarcinoma) cells labeling GAPDH with ab181602 at dilution of 1/500. The secondary antibody used was Alexa Fluor® 488; goat anti-rabbit IgG (ab150077) at a dilution of 1/400. Nucleus was counter-stained with DAPI (blue). ab7291, a mouse anti-tubulin antibody (1/500) was used to stain tubulin along with ab150120 (AlexaFluor®594 goat

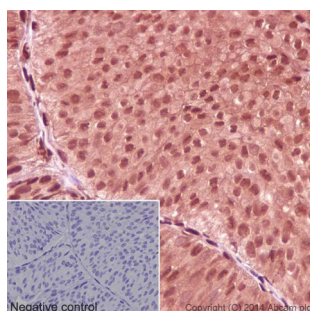
anti-mouse secondary, 1/500). The negative controls are shown in the bottom middle and right hand panels- for negative control 1 primary antibody (ab181602; 1/500) and secondary antibody (ab150120; 1/500) was used. For negative control 2 primary antibody (ab7291; 1/500) and secondary antibody (ab150077; 1/400) was used.



Flow Cytometry (Intracellular) - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

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

Intracellular flow cytometric analysis of 2% paraformaldehyde-fixed Jurkat (Human T cell leukemia cells from peripheral blood) cells labeling GAPDH with ab181602 at 1/180 dilution (red) compared with a rabbit monoclonal IgG isotype control (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (FITC) at 1/150 dilution was used as the secondary antibody.



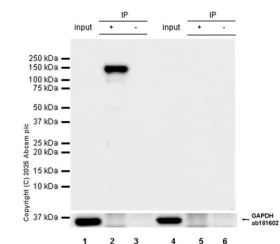
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

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

Immunohistochemical analysis of paraffin-embedded human transitional cell carcinoma of bladder tissue labeling GAPDH with ab181602 at 1/2000 dilution, followed by prediluted HRP Polymer for Rabbit/Mouse IgG. Cytoplasmic and nucleus staining on the tumor cells of transitional cell carcinoma of human bladder is observed. Counter stained with Hematoxylin.

Negative control: Using PBS instead of primary ab, secondary ab is prediluted HRP Polymer for Rabbit/Mouse IgG.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

Dnmt3a was immunoprecipitated from 0.35 mg Wild-type HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate with ab323708 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab323708 at 1000 dilution.

Blocking and dilution buffer and concentration: 5% NFDM/TBST

All lanes:

Immunoprecipitation - Anti-Dnmt3a antibody [EPR29184-89] (ab323708) at 1/1000 dilution

Lane 1:

(Input) Wild-type HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate at 10 µg

Lane 2:

ab323708 at 1/30 IP in Wild-type HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate at 10 µg

Lane 3:

Rabbit monoclonal IgG (ab172730) instead of ab323708 in parental HeLa whole cell lysate at 10 µg

Lane 4:

(Input) DNMT3A knockout HeLa whole cell lysate at 10 µg

Lane 5:

[ab323708](#) at 1/30 IP in DNMT3A knockout HeLa whole cell lysate at 10 µg

Lane 6:

Rabbit monoclonal IgG ([ab172730](#)) instead of [ab323708](#) in DNMT3A knockout HeLa whole cell lysate at 10 µg

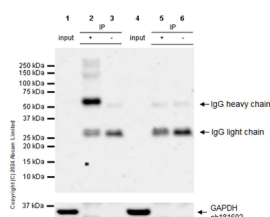
Secondary

All lanes:

Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)) at 1/5000 dilution

Observed band size: 130 kDa, 36 kDa

Exposure time: 24s



Immunoprecipitation - Anti-GAPDH antibody [EPR16891] - Loading Control ([ab181602](#))

STT3A was immunoprecipitated from 0.35 mg HEK-293T (human embryonic kidney epithelial cell) whole cell lysate with [ab320831](#) at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using [ab320831](#) at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)([ab131366](#)) was used at 1/5000 dilution.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

In Immunoprecipitation, [ab320831](#) was shown to bind specifically to STT3A. Target of interest was enriched at 60 kDa in wild-type HEK-293T cell lysates (lane 2) with no signal observed at this size in STT3A knockout cell line (lane 5) (lane 5, knockout cell line [ab266320](#) / knockout cell lysate [ab259164](#)).

The bands above 60kDa are likely to be aggregation, and are absent in the KO samples. Unlike the Western Blot data, these samples have been boiled. [ab181602](#) was used as a GAPDH loading control.

All lanes:

Immunoprecipitation - Anti-STT3A antibody [EPR29178-10] ([ab320831](#)) at 1/1000 dilution

Lane 1:

Parental HEK-293T (human embryonic kidney epithelial cell) whole cell lysate at 10 µg

Lane 2:

Parental HEK-293T (human embryonic kidney epithelial cell) whole cell lysate

Lane 3:

Rabbit monoclonal IgG ([ab172730](#)) instead of [ab320831](#) in Parental HEK-293T whole cell lysate

Lane 4:

STT3A KO HEK-293T (human embryonic kidney epithelial cell) whole cell lysate at 10 µg

Lane 5:

Immunoprecipitation - Human STT3A knockout HEK-293T cell line ([ab266320](#))

Lane 6:

Rabbit monoclonal IgG ([ab172730](#)) instead of [ab320831](#) in STT3A KO HEK-293T whole cell lysate

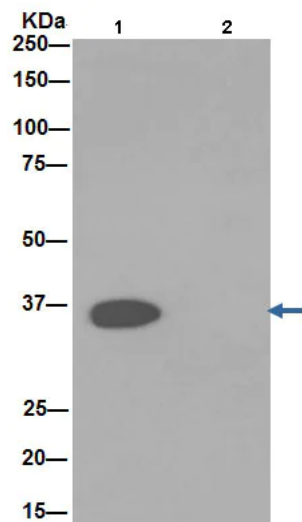
Secondary

All lanes:

Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)) at 1/5000 dilution

Observed band size: 60 kDa

Exposure time: 84s



Immunoprecipitation - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH was immunoprecipitated from 1mg of HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell extract with ab181602 at 1/60 dilution. Western blot was performed from the immunoprecipitate using ab181602 at 1/5000 dilution. Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG, was used as secondary antibody at 1/1500 dilution. **Lane 1:** HeLa whole cell extract.

Lane 2: PBS instead of HeLa whole cell extract.

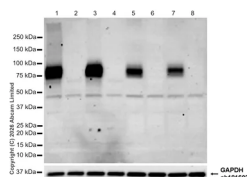
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

All lanes:

Immunoprecipitation - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

Predicted band size: 36 kDa

Observed band size: 36 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

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

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

The tissue samples were kindly provided by GemPharmatech. C57BL/6JGpt wildtype mice and IL1r1-KO homozygous mice (Strain ID: T005977).

All lanes:

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IL1 Receptor I/IL-1R-1 antibody [EPR22198-36] ([ab229051](#)) at 1/1000 dilution

Lane 1:

Wild-type mouse spleen tissue lysate (female) at 20 µg

Lane 2:

IL1r1 knockout mouse spleen tissue lysate (female) at 20 µg

Lane 3:

Wild-type mouse spleen tissue lysate (male) at 20 µg

Lane 4:

IL1r1 knockout mouse spleen tissue lysate (male) at 20 µg

Lane 5:

Wild-type mouse thymus tissue lysate (female) at 20 µg

Lane 6:

IL1r1 knockout mouse thymus tissue lysate (female) at 20 µg

Lane 7:

Wild-type mouse thymus tissue lysate (male) at 20 µg

Lane 8:

IL1r1 knockout mouse thymus tissue lysate (male) at 20 µg

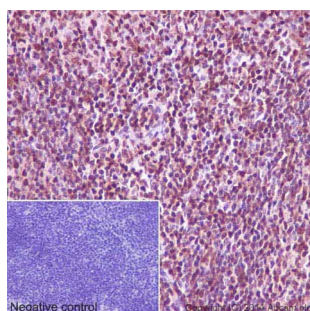
Secondary

All lanes:

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

Observed band size: 81 kDa, 36 kDa

Exposure time: 3min



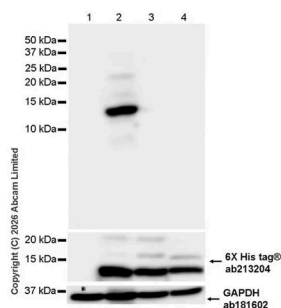
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

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

Immunohistochemical analysis of paraffin-embedded mouse spleen tissue labeling GAPDH with ab181602 at 1/2000 dilution, followed by prediluted HRP Polymer for Rabbit/Mouse IgG. Nucleus and cytoplasmic staining on lymphocytes of mouse spleen is observed. Counter stained with Hematoxylin.

Negative control: Using PBS instead of primary ab, secondary ab is prediluted HRP Polymer for Rabbit/Mouse IgG.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

This antibody does not cross-react with human CXCL2 and CXCL3.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36kDa); Anti-6X His tag® antibody [EPR20547] - ChIP Grade ([ab213204](#)) (1:5000)(11kDa).

All lanes:

Western blot - Anti-CXCL1 antibody [EPR31264-520] ([ab326942](#)) at 1/1000 dilution

Lane 1:

293T cells transfected with an empty vector containing a his-tag, whole cell lysate at 20 µg

Lane 2:

293T cells transfected with a human CXCL1 expression vector containing a his-tag, whole cell lysate at 20 µg

Lane 3:

293T cells transfected with a human CXCL2 expression vector containing a his-tag, whole cell lysate at 20 µg

Lane 4:

293T cells transfected with a human CXCL3 expression vector containing a his-tag, whole cell lysate at 20 µg

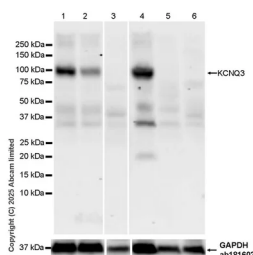
Secondary

All lanes:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/1000 dilution

Observed band size: 11 kDa, 36 kDa

Exposure time: 180s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

Low expression: liver, kidney(PMID: 9677360), spleen

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36KDa).

Exposure time: Lanes 1-3: 26 seconds, Lanes 4-6: 37 seconds

All lanes:

Western blot - Anti-KCNQ3 antibody [EPR25237-111] ([ab325554](#)) at 1/1000 dilution

Lane 1:

Human cerebral cortex tissue lysate at 40 µg

Lane 2:

Human hippocampus tissue lysate at 40 µg

Lane 3:

Human liver tissue lysate at 40 µg

Lane 4:

Mouse brain tissue lysate at 40 µg

Lane 5:

Mouse spleen tissue lysate at 40 µg

Lane 6:

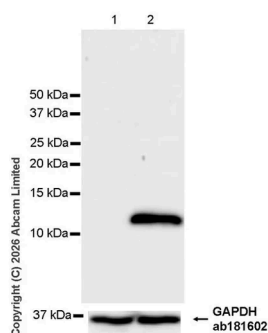
Mouse liver tissue lysate at 40 µg

Secondary

All lanes:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Observed band size: 96 kDa, 36 kDa



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining of HUVEC treated with 0.5 µg/ml LPS for 4 h, 300 ng/ml BFA was then added for additional 20 h whole cell lysate using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36KDa).

All lanes:

Western blot - Anti-CXCL1 antibody [EPR31264-520] ([ab326942](#)) at 1/1000 dilution

Lane 1:

Untreated HUVEC (human umbilical vein endothelial cell) whole cell lysate at 20 µg

Lane 2:

HUVEC treated with 0.5 µg/ml LPS for 4 h, 300 ng/ml BFA was then added for additional 20 h whole cell lysate at 20 µg

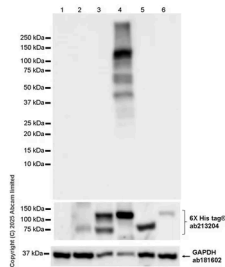
Secondary

All lanes:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/1000 dilution

Observed band size: 11 kDa, 36 kDa

Exposure time: 37s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

This antibody does not cross-react with human KCNQ1, KCNQ2, KCNQ4 or KCNQ5 by western blot.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36kDa); Anti-6X His tag® antibody [EPR20547] - ChIP Grade ([ab213204](#)) (1:5000)(96kDa).

All lanes:

Western blot - Anti-KCNQ3 antibody [EPR25237-111] ([ab325554](#)) at 1/1000 dilution

Lane 1:

293T cells transfected with an empty vector containing a his-tag, whole cell lysate at 20 µg

Lane 2:

293T cells transfected with a human KCNQ1 expression vector containing a his-tag, whole cell lysate at 20 µg

Lane 3:

293T cells transfected with a human KCNQ2 expression vector containing a his-tag, whole cell lysate at 4 µg

Lane 4:

293T cells transfected with a human KCNQ3 expression vector containing a his-tag, whole cell lysate at 4 µg

Lane 5:

293T cells transfected with a human KCNQ4 expression vector containing a his-tag, whole cell lysate at 20 µg

Lane 6:

293T cells transfected with a human KCNQ5 expression vector containing a his-tag, whole cell lysate at 20 µg

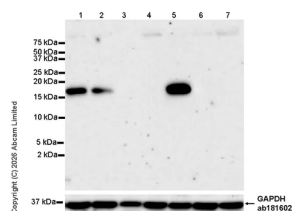
Secondary

All lanes:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Observed band size: 96 kDa, 36 kDa

Exposure time: 6s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

Low expression: JEG-3, A375, B16-F10, NIH/3T3.

The identity of the band higher than 75 kDa is unknown.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36kDa).

All lanes:

Western blot - Anti-CPLX1 antibody [EPR31022-42] ([ab327002](#)) at 1/1000 dilution

Lane 1:

IMR-32 (human neuroblastoma neuroblast) whole cell lysate at 20 µg

Lane 2:

NCI-H69 (human lung small cell carcinoma cell line) whole cell lysate at 20 µg

Lane 3:

JEG-3 (human placenta epithelial cell) whole cell lysate at 20 µg

Lane 4:

A375 (human malignant melanoma epithelial cell) whole cell lysate at 20 µg

Lane 5:

Neuro-2a (mouse neuroblastoma neuroblast) whole cell lysate at 20 µg

Lane 6:

B16-F0 (mouse melanoma epithelial-like cell) whole cell lysate at 20 µg

Lane 7:

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

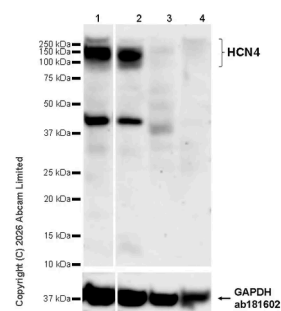
Secondary

All lanes:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

Observed band size: 17 kDa, 36 kDa

Exposure time: 180s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

Negative control: liver, kidney(PMID: 10228147)

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 14657344

; PMID: 30877792).

The identity of the lower MW band at approximately 50 kDa in lanes 1-2 is unknown.

This blot was developed using a high-sensitivity ECL substrate, allowing for the detection of proteins in the mid-femtogram range.

Samples are non-boiled as boiling may cause protein aggregation.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36KDa).

All lanes:

Western blot - Anti-HCN4 antibody [EPR30362-531] ([ab327083](#)) at 1/1000 dilution

Lane 1:

Human Thalamus tissue lysate at 50 µg

Lane 2:

Human hypothalamus tissue lysate at 50 µg

Lane 3:

Human liver tissue lysate at 50 µg

Lane 4:

Human kidney tissue lysate at 50 µg

Secondary

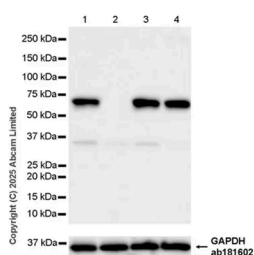
All lanes:

Goat anti-Mouse IgG Fc Cross-Adsorbed Secondary Antibody, HRP (ThermoFisher, 31439) at 1/2000 dilution

Developed using the ECL technique.

Observed band size: 100-150 kDa, 36 kDa

Exposure time: 125s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

In Western blot, [ab325320](#) was shown to bind specifically to UBQLN1. Target of interest was observed at 62 kDa in wild-type HeLa cell lysates (lane 1) with no signal observed at this size in UBQLN1 knockout cell line (lane 2, knockout cell line [ab266047](#) / knockout cell lysate [ab259229](#)).

The identity of the lower MW band at approximately 35 kDa is unknown.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:

Western blot - Anti-Ubiquilin/UBQLN1 antibody [EPR29585-56] ([ab325320](#)) at 1/1000 dilution

Lane 1:

Wild-type HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:

Western blot - Human UBQLN1 (Ubiquilin) knockout HeLa cell lysate ([ab259229](#)) at 20 µg

Lane 3:
786-O (human kidney epithelial cell) whole cell lysate at 20 µg

Lane 4:
HEK-293 (human embryonic kidney epithelial cell) whole cell lysate at 20 µg

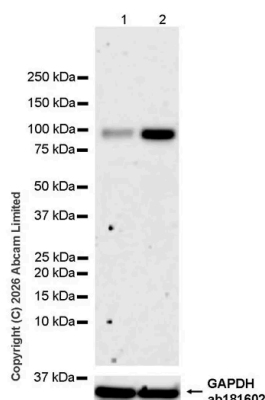
Secondary

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

Performed under reducing conditions.

Observed band size: 62 kDa, 36 kDa

Exposure time: 37s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining of HeLa treated with 2µM Aphidicolin for 24h, fresh whole cell lysate using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36kDa).

All lanes:

Western blot - Anti-FoxM1 antibody [EPR30945-524] ([ab327650](#)) at 1/1000 dilution

Lane 1:

Untreated HeLa (human cervical adenocarcinoma epithelial cell) fresh whole cell lysate at 20 µg

Lane 2:

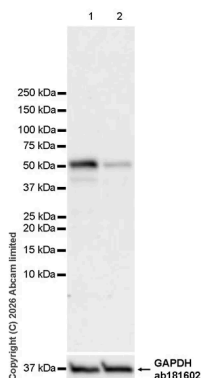
HeLa treated with 2µM Aphidicolin for 24h, fresh whole cell lysate at 20 µg

Secondary

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

Observed band size: 100 kDa, 36 kDa

Exposure time: 180s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining of MCF7 (human breast adenocarcinoma epithelial cell) transfected with scrambled siRNA control whole cell lysate using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36kDa).

All lanes:

Western blot - Anti-Estrogen Related Receptor alpha antibody [EPR30313-532] ([ab327347](#)) at 1/1000 dilution

Lane 1:

MCF7 (human breast adenocarcinoma epithelial cell) transfected with scrambled siRNA control whole cell lysate at 20 µg

Lane 2:

MCF7 transfected with siRNA specifically targeting ESRRA whole cell lysate at 20 µg

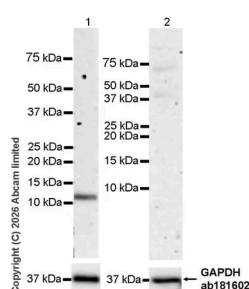
Secondary

All lanes:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

Observed band size: 50 kDa, 36 kDa

Exposure time: 59s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control ([ab181602](#))

GAPDH Western blot staining of Human ovary cancer tissue lysate using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

Low expression: liver

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control ([ab181602](#)) (1:200000) (36kDa).

All lanes:

Western blot - Anti-MCP2 antibody [EPR29033-501] ([ab327462](#)) at 1/1000 dilution

Lane 1:

Human ovary cancer tissue lysate at 20 µg

Lane 2:

Human liver tissue lysate at 20 µg

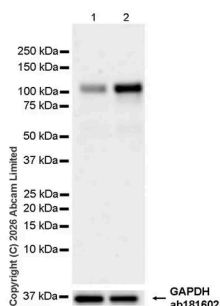
Secondary

All lanes:

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

Observed band size: 11 kDa, 36 kDa

Exposure time: 180s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining of U-2 OS treated with 2μM Aphidicolin for 24h, fresh whole cell lysate using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36KDa).

All lanes:

Western blot - Anti-FoxM1 antibody [EPR30945-524] ([ab327650](#)) at 1/1000 dilution

Lane 1:

Untreated U-2 OS (human bone osteosarcoma epithelial cell) fresh whole cell lysate at 20 μg

Lane 2:

U-2 OS treated with 2μM Aphidicolin for 24h, fresh whole cell lysate at 20 μg

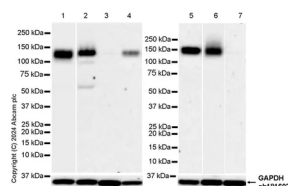
Secondary

All lanes:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

Observed band size: 100 kDa, 36 kDa

Exposure time: 70s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Low expression: liver (PMID: 11564734, 16868960), pancreas (PMID:11564734).

The expression profile/ molecular weight observed is consistent with what has been described in the literature (16868960, 11564734).

Lanes 5-7 are applied with Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated ([ab97051](#)) at 1/100000 and lanes 1-4 are applied with Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

Exposure time: Lane 1: 26 seconds, lane 6: 37 seconds, lanes 2-5 and 7: 180 seconds

All lanes:

Western blot - Anti-Colec12 antibody [EPR29371-589] ([ab317630](#)) at 1/1000 dilution

Lane 1:

Human placenta tissue lysate at 20 μg

Lane 2:

Human lung tissue lysate at 20 μg

Lane 3:

Human liver tissue lysate at 20 μg

Lane 4:

Human pancreas tissue lysate at 20 µg

Lane 5:

Rat lung tissue lysate at 20 µg

Lane 6:

Rat placenta tissue lysate at 20 µg

Lane 7:

Rat liver tissue lysate at 20 µg

Secondary

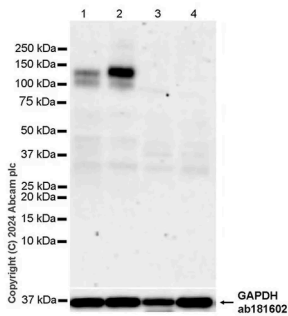
Lanes 1 - 4:

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

Lanes 5 - 7:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Observed band size: 110 kDa, 130 kDa, 150 kDa, 36 kDa



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Low expression: A549, Jurkat (PMID:12761161).

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 16868960, 11564734).

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:

Western blot - Anti-Colec12 antibody [EPR29371-589] ([ab317630](#)) at 1/1000 dilution

Lane 1:

LNCaP (human prostate carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:

HUVEC (human umbilical vein endothelial cell) whole cell lysate at 20 µg

Lane 3:

A549 (human lung carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 4:

Jurkat (human T cell leukemia T lymphocyte from peripheral blood) whole cell lysate at 20 µg

Secondary

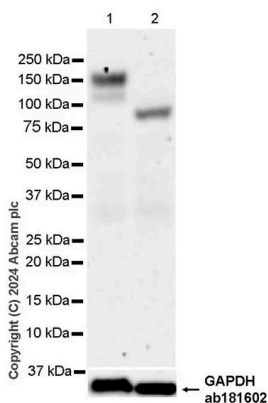
All lanes:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Developed using the ECL technique.

Observed band size: 110 kDa, 130 kDa, 36 kDa

Exposure time: 180s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Collectin-12 is a glycoprotein of approximately 110-150 kDa and detected as a 90-kDa band after treated with Peptide:N-glycosidase F (PNGase F).

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 16868960, 11564734).

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:

Western blot - Anti-Colec12 antibody [EPR29371-589] ([ab317630](#)) at 1/1000 dilution

Lane 1:

Untreated 293T (human embryonic kidney epithelial cell) whole cell lysate at 20 µg

Lane 2:

293T cell lysate treated with Peptide:N-glycosidase F (PNGase F) at 20 µg

Secondary

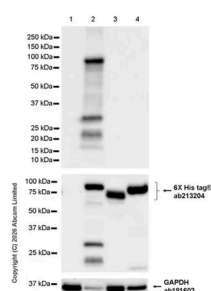
All lanes:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Developed using the ECL technique.

Observed band size: 110-150 kDa, 90 kDa, 36 kDa

Exposure time: 180s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

This antibody does not cross-react with overexpressed human DLL3 or DLL4 by western blot.

In Western blot, Anti-6X His tag[®] antibody [EPR20547] - ChIP Grade ([ab213204](#)) (1:5000)(85, 30kDa); Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36kDa).

All lanes:

Western blot - Anti-DLL1 antibody [EPR29655-26] ([ab327088](#)) at 1/1000 dilution

Lane 1:

293T (human embryonic kidney epithelial cell) cells transfected with an empty vector containing a myc-His-tag[®] whole cell lysate at 20 µg

Lane 2:

293T cells transfected with a human DLL1 expression vector containing a myc-His-tag[®] whole cell lysate at 20 µg

Lane 3:

293T cells transfected with a human DLL3 expression vector containing a myc-His-tag[®] whole cell lysate at 20 µg

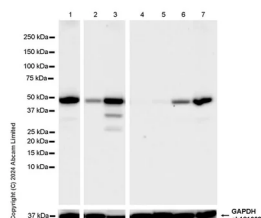
Lane 4:
293T cells transfected with a human DLL4 expression vector containing a myc-His-tag® whole cell lysate at 20 µg

Secondary

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

Observed band size: 85 kDa, 30 kDa, 36 kDa

Exposure time: 8s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

Low expression: cerebellum, skeletal muscle (PMID: 8706755).

The bands beneath the target band are likely to be degraded target fragments.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:
Western blot - Anti-L-Kynurenine Hydrolase antibody [EPR29256-30] ([ab320833](#)) at 1/1000 dilution

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

Lane 2:
Human lung tissue lysate at 20 µg

Lane 3:
Human liver tissue lysate at 20 µg

Lane 4:
Human cerebellum tissue lysate at 20 µg

Lane 5:
Human skeletal muscle tissue lysate at 20 µg

Lane 6:
HepG2 (human hepatocellular carcinoma epithelial cell) whole cell lysate at 20 µg

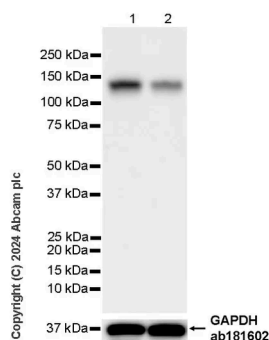
Lane 7:
A549 (human lung carcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

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

Observed band size: 52 kDa, 36 kDa

Exposure time: 10s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:

Western blot - Anti-NOMO1+ NOMO2+NOMO3 antibody [EPR30020-704] (ab323180) at 1/1000 dilution

Lane 1:

A549 (human lung carcinoma epithelial cell) transfected with scrambled siRNA control whole cell lysate at 20 µg

Lane 2:

A549 transfected with siRNA specifically targeting NOMO1/2/3 whole cell lysate at 20 µg

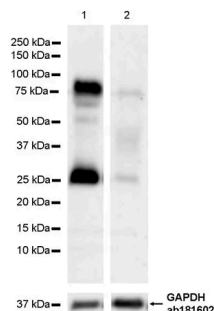
Secondary

All lanes:

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

Observed band size: 134 kDa, 36 kDa

Exposure time: 15s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining of Human lung tissue lysate using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

Low expression: brainstem

The band beneath the target band (30 kDa) is likely to be degraded target fragments.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:

Western blot - Anti-CD42d/GP5 antibody [EPR29976-582] (ab322703) at 1/1000 dilution

Lane 1:

Human lung tissue lysate at 50 µg

Lane 2:

Human brainstem tissue lysate at 50 µg

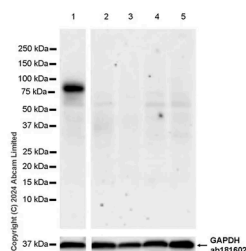
Secondary

All lanes:

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

Observed band size: 60-100 kDa, 36 kDa

Exposure time: 114s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

Low expression: MCF7, HepG2, PC-3, Hela.

The molecular weight observed is consistent with what has been described in the literature (PMID: 2350580).

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:

Western blot - Anti-CD42d/GP5 antibody [EPR29976-582] ([ab322703](#)) at 1/1000 dilution

Lane 1:

HEL (human erythroleukemia erythroblast) whole cell lysate at 50 µg

Lane 2:

MCF7 (human breast adenocarcinoma epithelial cell) whole cell lysate at 50 µg

Lane 3:

HepG2 (human hepatocellular carcinoma epithelial cell) whole cell lysate at 50 µg

Lane 4:

PC-3 (human prostate adenocarcinoma epithelial cell) whole cell lysate at 50 µg

Lane 5:

HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate at 50 µg

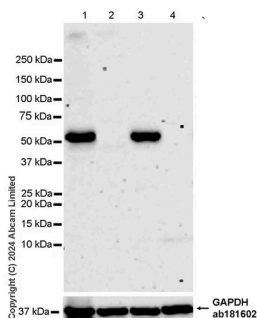
Secondary

All lanes:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

Observed band size: 60-100 kDa, 36 kDa

Exposure time: 114s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

Negative control: lung, HepG2

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:

Western blot - Anti-ALDH3A1 antibody [EPR30153-518] ([ab322711](#)) at 1/1000 dilution

Lane 1:

A549 (human lung carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:

HepG2 (human hepatocellular carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 3:

Human stomach tissue lysate at 20 µg

Lane 4:

Human lung tissue lysate at 20 µg

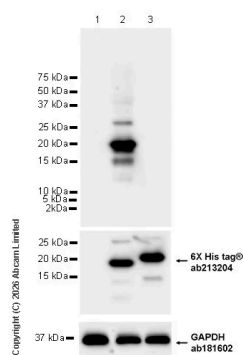
Secondary

All lanes:

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

Observed band size: 50 kDa, 36 kDa

Exposure time: 180s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

This antibody does not cross-react with overexpressed human CPLX2 by western blot.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36kDa); Anti-6X His tag® antibody [EPR20547] - ChIP Grade (ab213204) (1:5000) (17kDa).

All lanes:

Western blot - Anti-CPLX1 antibody [EPR31022-42] (ab327002) at 1/1000 dilution

Lane 1:

293T (human embryonic kidney epithelial cell) cells transfected with an empty vector containing a myc-His-tag® whole cell lysate at 10 µg

Lane 2:

293T cells transfected with a human CPLX1 expression vector containing a myc-His-tag® whole cell lysate at 10 µg

Lane 3:

293T cells transfected with a human CPLX2 expression vector containing a myc-His-tag® whole cell lysate at 10 µg

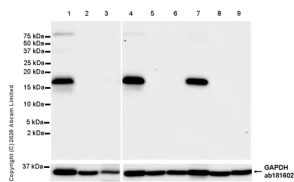
Secondary

All lanes:

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

Observed band size: 17 kDa, 36 kDa

Exposure time: 180s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

Negative control: spleen, liver(PMID: 7553862; PMID: 10051208)

The identity of the band higher than 75 kDa is unknown.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36kDa).

All lanes:

Western blot - Anti-CPLX1 antibody [EPR31022-42] (ab327002) at 1/1000 dilution

Lane 1:

Human cerebellum tissue lysate at 20 µg

Lane 2:

Human liver tissue lysate at 20 µg

Lane 3:

Human spleen tissue lysate at 20 µg

Lane 4:

Mouse cerebellum tissue lysate at 20 µg

Lane 5:

Mouse liver tissue lysate at 20 µg

Lane 6:

Mouse spleen tissue lysate at 20 µg

Lane 7:

Rat cerebellum tissue lysate at 20 µg

Lane 8:

Rat liver tissue lysate at 20 µg

Lane 9:

Rat spleen tissue lysate at 20 µg

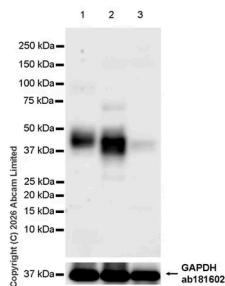
Secondary

All lanes:

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

Observed band size: 17 kDa, 36 kDa

Exposure time: 180s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

Low expression: Saos-2.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36kDa).

All lanes:

Western blot - Anti-MyD88 (phospho Y257) antibody [EPR27979-501] (ab328146) at 1/1000 dilution

Lane 1:

U-937 (human histiocytic lymphoma monocyte) whole cell lysate at 80 µg

Lane 2:

293T (human embryonic kidney epithelial cell) whole cell lysate at 80 µg

Lane 3:

Saos-2 (human osteosarcoma epithelial cell) whole cell lysate at 80 µg

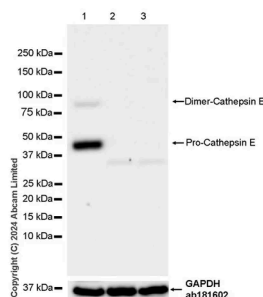
Secondary

All lanes:

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

Observed band size: 37-50 kDa, 36 kDa

Exposure time: 59s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

Low expression: DLD-1, LoVo(PMID: 23451082)

Dimerization of two identical 42 kDa subunits of Cathepsin E results in the formation of the approximately 84 kDa mature enzyme(PMID: 7789521).

The identity of the lower MW band in lanes 2-3 are unknown.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:

Western blot - Anti-Cathepsin E antibody [EPR29973-715] (ab322657) at 1/1000 dilution

Lane 1:

KATO III (human stomach spherical) whole cell lysate at 20 µg

Lane 2:

DLD-1 (human colorectal adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 3:

LoVo (human colorectal adenocarcinoma epithelial cell) whole cell lysate at 20 µg

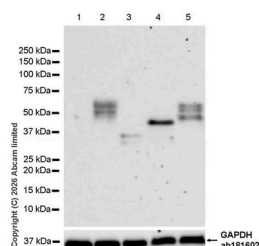
Secondary

All lanes:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Observed band size: 42 kDa, 84 kDa, 36 kDa

Exposure time: 10s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

Low expression: HeLa, LNCaP (PMID:20236697).

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36KDa).

All lanes:

Western blot - Anti-CRLF2 antibody [EPR28741-186] ([ab328151](#)) at 1/1000 dilution

Lane 1:

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

Lane 2:

MJ [G11] (human Peripheral blood T lymphoblast) whole cell lysate at 20 µg

Lane 3:

LNCaP (human prostate carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 4:

U266B1 whole cell lysate treated with Protein Deglycosylation MIX II at 15 µg

Lane 5:

Untreated U266B1 whole cell lysate at 15 µg

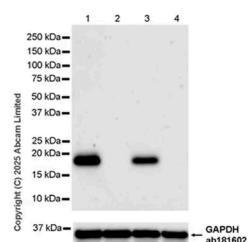
Secondary

All lanes:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

Observed band size: 42-60 kDa, 36 kDa

Exposure time: 180s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

Negative control: HeLa (PMID: 12719594; PMID: 8570175), RPMI-8226.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36KDa).

All lanes:

Western blot - Anti-BATF antibody [EPR28945-705] ([ab324487](#)) at 1/1000 dilution

Lane 1:

KARPAS-299 (human t cell lymphoma cell) whole cell lysate at 20 µg

Lane 2:

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

Lane 3:

HDLM-2 (human hodgkin lymphoma cell) whole cell lysate at 20 µg

Lane 4:

RPML-8226 (human plasmacytoma b lymphocyte) whole cell lysate at 20 µg

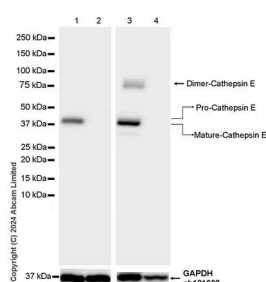
Secondary

All lanes:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

Observed band size: 17 kDa, 36 kDa

Exposure time: 180s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

Negative control: liver

Dimerization of two identical 42 kDa subunits of Cathepsin E results in the formation of the approximately 84 kDa mature enzyme(PMID: 7789521).

In Western Blot, we detect bands at ~39 KDa and ~42 KDa. Human CTSE gene has several splicing variants. Based on the immunogen sequence, this antibody is expected to detect isoforms P14091-1 and P14091-2 (PMID: 12531480).

Mouse CTSE gene has 1 potential isoform.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:

Western blot - Anti-Cathepsin E antibody [EPR29973-715] ([ab322657](#)) at 1/1000 dilution

Lane 1:

Mouse stomach tissue lysate at 20 µg

Lane 2:

Mouse liver tissue lysate at 20 µg

Lane 3:

Human stomach tissue lysate at 20 µg

Lane 4:

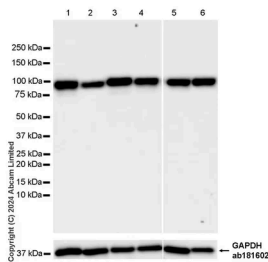
Human liver tissue lysate at 20 µg

Secondary

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

Observed band size: 39 kDa, 42 kDa, 78-84 kDa, 36 kDa

Exposure time: 1s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:
Western blot - Anti-SEL1L antibody [EPR28893-20] ([ab322704](#)) at 1/1000 dilution

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

Lane 2:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 20 µg

Lane 3:
Human placenta tissue lysate at 20 µg

Lane 4:
Human testis tissue lysate at 20 µg

Lane 5:
Mouse placenta tissue lysate at 20 µg

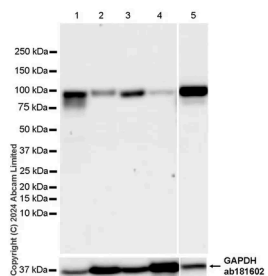
Lane 6:
Mouse testis tissue lysate at 20 µg

Secondary

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

Observed band size: 100 kDa, 36 kDa

Exposure time: 3s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

Low expression: skeletal muscle(PMID: 9858735)

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:

Western blot - Anti-SEL1L antibody [EPR28893-20] ([ab322704](#)) at 1/1000 dilution

Lane 1:

Human liver tissue lysate at 20 µg

Lane 2:

Human skeletal muscle tissue lysate at 20 µg

Lane 3:

Mouse liver tissue lysate at 20 µg

Lane 4:

Mouse skeletal muscle tissue lysate at 20 µg

Lane 5:

Mouse pancreas tissue lysate at 20 µg

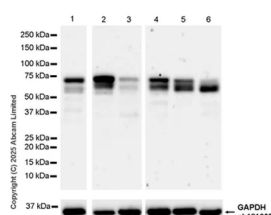
Secondary

All lanes:

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

Observed band size: 100 kDa, 36 kDa

Exposure time: 26s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

Low expression: liver (PMID: 37753846).

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

Exposure time: Lanes 1: 180 seconds; Lanes 2-3: 81 seconds; Lanes 4-6: 180 seconds.

All lanes:

Western blot - Anti-FBXO7 antibody [EPR29658-670] ([ab324143](#)) at 1/1000 dilution

Lane 1:

SH-SY5Y (human neuroblastoma epithelial cell) whole cell lysate at 20 µg

Lane 2:

Mouse testis tissue lysate at 20 µg

Lane 3:

Mouse liver tissue lysate at 20 µg

Lane 4:

Mouse cerebellum tissue lysate at 20 µg

Lane 5:

B16-F10 (mouse skin melanoma cell) whole cell lysate at 20 µg

Lane 6:

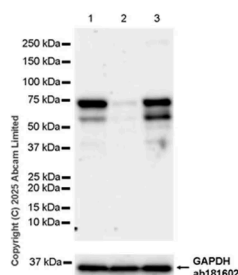
MEF (mouse embryo fibroblast) whole cell lysate at 20 µg

Secondary

All lanes:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

Observed band size: 65-72 kDa, 36 kDa



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

The molecular weight observed is consistent with what has been described in the literature (PMID: 21347293; PMID: 23656991), the multiple bands are isoforms.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:

Western blot - Anti-FBXO7 antibody [EPR29658-670] ([ab324143](#)) at 1/1000 dilution

Lane 1:

HEK-293 (human embryonic kidney epithelial cell) transfected with scrambled siRNA control whole cell lysate at 20 µg

Lane 2:

HEK-293 transfected with siRNA specifically targeting FBXO7 whole cell lysate at 20 µg

Lane 3:

K-562 (human chronic myelogenous leukemia lymphoblast) whole cell lysate at 20 µg

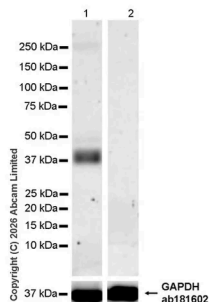
Secondary

All lanes:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

Observed band size: 65-72 kDa, 36 kDa

Exposure time: 125s



Western blot - Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602)

GAPDH Western blot staining of Human colon tissue lysate using rabbit Anti-GAPDH antibody

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

Low expression: cerebellum (PMID: 9575168).

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36KDa).

All lanes:

Western blot - Anti-MyD88 (phospho Y257) antibody [EPR27979-501] ([ab328146](#)) at 1/1000 dilution

Lane 1:

Human colon tissue lysate at 80 µg

Lane 2:

Human cerebellum tissue lysate at 80 µg

Secondary

All lanes:

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

Observed band size: 37-50 kDa, 36 kDa

Exposure time: 180s

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