abcam

ab51603

Anti-DYNLL1/PIN antibody [EP1660Y]

Recombinant | RabMAb | KO Validated

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), 0.21% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EP1660Y
Purification technique	Affinity purification Protein A
Specificity	ab51603 recognizes DLC8.
Epitope	The epitope for this antibody is on the N-terminus, AA2-14.
Concentration	0.645 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human

Dilution info	1/30
Notes	**For unpurified use at 1/100.**

Expected

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

Predicted

Species	Drosophila melanogaster
Dilution info	-
Notes	-

WB

Tested

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

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

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

Predicted

Species	Drosophila melanogaster
Dilution info	-
Notes	-

ICC/IF

Tested

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

Expected

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

Predicted

Species	Drosophila melanogaster
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/2300
Notes	-

Expected

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

Predicted

Species	Drosophila melanogaster

Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/500
Notes	-

Not recommended

Species	Mouse, Rat, Drosophila melanogaster
Dilution info	-
Notes	-

Target data

See full target information DYNLL1

Function

Component of dynein, a family of motor proteins essential for movement along microtubules (By similarity). Required for structural and functional integrity of cilia (By similarity). Acts as one of several non-catalytic accessory components of the cytoplasmic dynein 1 complex that are thought to be involved in linking dynein to cargos and to adapter proteins that regulate dynein function (By similarity). Cytoplasmic dynein 1 acts as a motor for the intracellular retrograde motility of vesicles and organelles along microtubules (By similarity). May play a role in changing or maintaining the spatial distribution of cytoskeletal structures (By similarity). In addition to its role in cytoskeleton and transport, acts as a protein-protein adapter, which inhibits and/or sequesters target proteins (PubMed:10198631, PubMed:15193260, PubMed:15891768, PubMed:16684779, PubMed:30464262, PubMed:37696958). Involved in the response to DNA damage by acting as a key regulator of DNA end resection: when phosphorylated at Ser-88, recruited to DNA double-strand breaks (DSBs) by TP53BP1 and acts by disrupting MRE11 dimerization, thereby inhibiting DNA end resection (PubMed:30464262, PubMed:37696958). In a subset of DSBs, DYNLL1 remains unphosphorylated and promotes the recruitment of the Shieldin complex (PubMed:37696958). Binds and inhibits the catalytic activity of neuronal nitric oxide synthase/NOS1 (By similarity). Promotes transactivation functions of ESR1 and plays a role in the nuclear localization of ESR1 (PubMed:15891768, PubMed:16684779). Regulates apoptotic activities of BCL2L11 by sequestering it to microtubules (PubMed:10198631, PubMed:15193260). Upon apoptotic stimuli the BCL2L11-DYNLL1 complex dissociates from cytoplasmic dynein and translocates to mitochondria and

sequesters BCL2 thus neutralizing its antiapoptotic activity (PubMed:10198631, PubMed:15193260).

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, Stable for 12 months at -20°C

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

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.

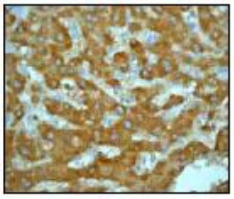
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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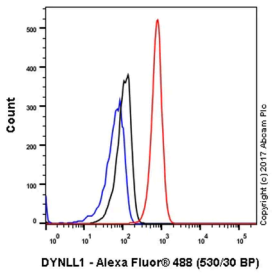
11 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DYNLL1/PIN antibody [EP1660Y] (ab51603)

DYNLL1/PIN Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-DYNLL1/PIN antibody

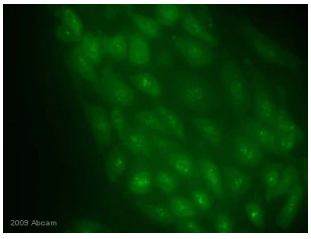
Immunohistochemical staining of paraffin embedded human liver using unpurified ab51603 (1/100).



Flow Cytometry (Intracellular) - Anti-DYNLL1/PIN antibody [EP1660Y] (ab51603)

DYNLL1/PIN Flow Cytometry (Intracellular) staining using rabbit Anti-DYNLL1/PIN antibody

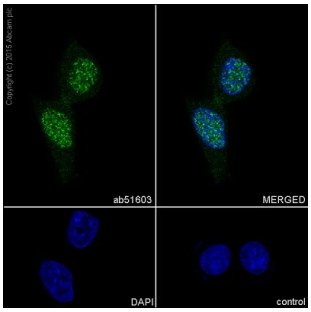
Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling DYNLL1/PIN (red) with purified ab51603 at a 1/2300 dilution. Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol. A goat anti-rabbit IgG (Alexa Fluorr® 488) (ab150077) was used as the secondary antibody at a 1/2000 dilution. Black - Rabbit monoclonal IgG (ab172730). Blue (unlabeled control) - Cells without incubation with the primary and secondary antibodies.



This image is courtesy of an anonymous customer review.

Immunocytochemistry/ Immunofluorescence - Anti-DYNLL1/PIN antibody [EP1660Y] (ab51603)

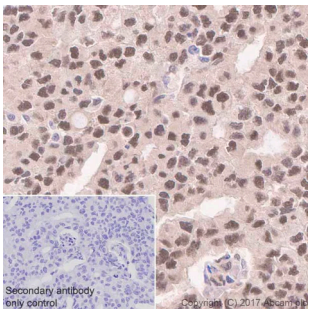
Unpurified ab51603 staining DLC8 in mouse kidney cells cells by ICC/IF (immunocytochemistry/immunofluorescence. Cells were fixed with methanol, permeabilized with 0.1% Triton and blocked with 1% milk for 1 hour at room temperature. The sample was incubated with primary antibody (1/400; 1% milk in PBS) for 16 hours at 4°C. An Alexa Fluor®488-conjugated Goat polyclonal to rabbit IgG (1/1000) was used as secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-DYNLL1/PIN antibody [EP1660Y] (ab51603)

DYNLL1/PIN Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-DYNLL1/PIN antibody

Immunocytochemistry/ Immunofluorescence analysis of MCF7 (Human breast adenocarcinoma epithelial cell) cells labeling DYNLL1/PIN with Purified ab51603 at 1:100 dilution (6.7µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. ab150077 Goat anti rabbit IgG(Alexa Fluor® 488) was used as the secondary antibody at 1:1000 dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DYNLL1/PIN antibody [EP1660Y] (ab51603)

DYNLL1/PIN Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-DYNLL1/PIN antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human breast carcinoma tissue sections labeling DYNLL1/PIN with Purified ab51603 at 1:500 dilution (1.34 µg/ml). Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use) secondary antibody was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.

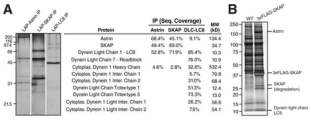
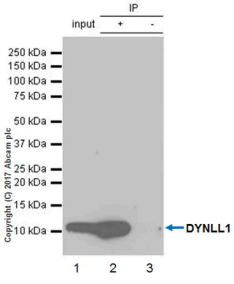


Image from Schmidt JC et al. J Cell Biol. 2010 Oct 18;191(2):269-80. Epub 2010 Oct 11 Fig 2. DOI 10.1083/jcb.201006129.

Immunoprecipitation - Anti-DYNLL1/PIN antibody [EP1660Y] (ab51603)

Unpurified ab51603 used in IP.SKAP and Astrin form a complex. (A, left) Silver-stained gels showing a one-step IP of GFPLAP-Astrin, GFPLAP-SKAP, or GFPLAP-LC8. (A, right) Data from the mass spectrometric analysis of the purifications indicating the percent sequence coverage from each IP. (B) Silver-stained gel showing the purification of FLAG-SKAP from chicken DT40 cells relative to controls. The indicated proteins were identified by excising them from a gel and analyzing them by mass spectrometry.
All lanes:
Immunoprecipitation - Anti-DYNLL1/PIN antibody [EP1660Y] (ab51603)

Predicted band size: 10 kDa



Immunoprecipitation - Anti-DYNLL1/PIN antibody [EP1660Y] (ab51603)

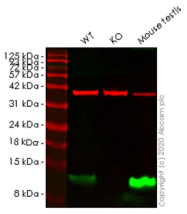
ab51603 (purified) at 1:30 dilution (2ug) immunoprecipitating DYNLL1/PIN in HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate.

Lane 1 (input): HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10ug
Lane 2 (+): ab51603 & HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab51603 in HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate

For western blotting, VeriBlot for IP Detection Reagent (HRP) (ab131366) was used for detection at

1:1000 dilution.
Blocking and diluting buffer: 5% NFDM/TBST.
All lanes:
Immunoprecipitation - Anti-DYNLL1/PIN antibody [EP1660Y] (ab51603)

Predicted band size: 10 kDa



Western blot - Anti-DYNLL1/PIN antibody [EP1660Y] (ab51603)

DYNLL1/PIN Western blot staining using rabbit Anti-DYNLL1/PIN antibody

Lanes 1-3: Merged signal (red and green). Green - ab51603 observed at 10 kDa. Red - loading control ab8245 observed at 36 kDa.
ab51603 Anti-DYNLL1/PIN antibody [EP1660Y] was shown to specifically react with DYNLL1/PIN in wild-type HeLa cells. Loss of signal was observed when knockout cell line ab265265 (knockout cell lysate ab257414) was used. Wild-type and DYNLL1/PIN knockout samples were subjected to SDS-PAGE. ab51603 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-DYNLL1/PIN antibody [EP1660Y] (ab51603) at 1/1000 dilution

Lane 1:
Wild-type HeLa cell lysate at 20 µg

Lane 2:
DYNLL1 knockout HeLa cell lysate at 20 µg

Lane 2:
Western blot - Human DYNLL1 (PIN) knockout HeLa cell line (ab265265)

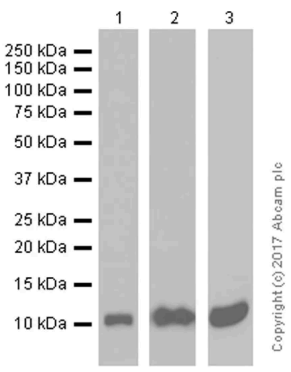
Lane 3:
Mouse testis tissue lysate at 20 µg

Secondary

All lanes:
Western blot - Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) at 1/10000 dilution

Predicted band size: 10 kDa

Observed band size: 10 kDa



Western blot - Anti-DYNLL1/PIN antibody [EP1660Y] (ab51603)

DYNLL1/PIN Western blot staining using rabbit Anti-DYNLL1/PIN antibody

Blocking and diluting buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-DYNLL1/PIN antibody [EP1660Y] (ab51603) at 1/10000 dilution

Lane 1:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates at 20 µg

Lane 2:
Mouse testis lysates at 20 µg

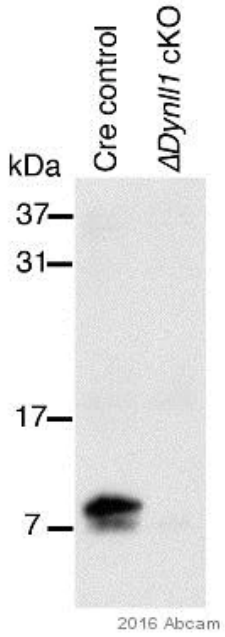
Lane 3:
Rat testis lysates at 20 µg

Secondary

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

Predicted band size: 10 kDa

Observed band size: 10 kDa



This image is courtesy of a customer review submitted by Dr. Jörg Heierhorst

Western blot - Anti-DYNLL1/PIN antibody [EP1660Y] (ab51603)

Lymphnodes were dissociated in PBS 2% FBS. Cell suspensions filtered through 70 µm and 40 µm cell strainers, and 300 x g pellets were lysed in modified RIPA buffer (150 mM NaCl, 20 mM Tris pH7.4, 1 mM EDTA, 1 mM EGTA, 10 mM NaF, 1% Triton X-100, 1% sodium deoxycholate, 0.1% SDS, 1 mM PMSF, 1 x protein inhibitor cocktail (Sigma)).
All lanes:
Western blot - Anti-DYNLL1/PIN antibody [EP1660Y] (ab51603) at 1/5000 dilution

Lane 1:
Primary mouse Mb1-Cre control Eµ-Myc B cell lymphoma (lysate of whole lymphnode)

Lane 2:
Primary mouse Mb1-Cre DYNLL1/PIN-conditional knockout Eµ-Myc B cell lymphoma (lysate of whole lymphnode)

Secondary

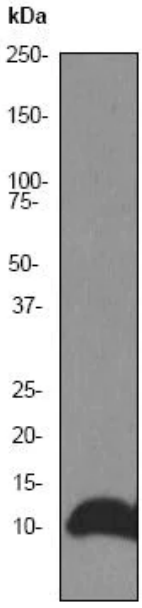
All lanes:
HRP conjugated polyclonal goat IgG at 1/5000 dilution

Performed under reducing conditions.

Predicted band size: 10 kDa

Observed band size: 10 kDa

Exposure time: 10min



Western blot - Anti-DYNLL1/PIN antibody [EP1660Y] (ab51603)

All lanes:
Western blot - Anti-DYNLL1/PIN antibody [EP1660Y] (ab51603) at 1/10000 dilution

All lanes:
HeLa cell lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP at 1/2000 dilution

Predicted band size: 10 kDa

Observed band size: 10 kDa

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