abcam

ab252950

Anti-ZWINT antibody [EPR23440-96]

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	EPR23440-96
Purification technique	Affinity purification Protein A
Concentration	0.453 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	-

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/250
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information ZWINT

Function

Acts as a component of the outer kinetochore KNL1 complex that serves as a docking point for spindle assembly checkpoint components and mediates microtubule-kinetochore interactions (PubMed:15094189, PubMed:15485811, PubMed:15824131, PubMed:16732327, PubMed:24530301, PubMed:27881301, PubMed:38459127, PubMed:38459128). Kinetochores, consisting of a centromere-associated inner segment and a microtubule-contacting outer segment, play a crucial role in chromosome segregation by mediating the physical connection between centromeric DNA and spindle microtubules (PubMed:15094189, PubMed:15485811, PubMed:16732327). The outer kinetochore is made up of the ten-subunit KMN network, comprising the MIS12, NDC80 and KNL1 complexes, and auxiliary microtubule-associated components; together they connect the outer kinetochore with the inner kinetochore, bind microtubules, and mediate interactions with mitotic checkpoint proteins that delay anaphase until chromosomes are bioriented on the spindle (PubMed:15094189, PubMed:15485811, PubMed:15824131, PubMed:16732327, PubMed:24530301, PubMed:38459127, PubMed:38459128). Targets the RZZ complex to the kinetochore at prometaphase (PubMed:15485811). Recruits MAD2L1 to the kinetochore, but is not required for BUB1B localization (By similarity). In addition to orienting mitotic chromosomes, it is also essential for alignment of homologous chromosomes during meiotic metaphase I (By similarity). In meiosis I, required to activate the spindle assembly checkpoint at unattached kinetochores to correct erroneous kinetochore-microtubule attachments (PubMed:15485811).

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	ZWINT also known as ZW10 interactor is a protein that plays an important role in the attachment of kinetochores to the spindle microtubules during mitosis. It has a molecular weight of approximately 35 kDa. This protein is broadly expressed in various tissues with especially high presence in dividing cells reflecting its importance in cell division processes.
Biological function summary	ZWINT functions as a part of the kinetochore complex which is essential for chromosome segregation during mitotic cell division. It interacts with other kinetochore proteins to facilitate the correct attachment of chromosomes to the spindle apparatus. This interaction ensures that chromosomes are accurately distributed to daughter cells maintaining genomic stability.
Pathways	The ZWINT protein is integral in the mitotic spindle checkpoint pathway also known as the spindle assembly checkpoint. It works closely with proteins such as ZW10 and Rod to monitor and regulate the attachment of spindle microtubules to the kinetochores preventing aneuploidy during cell division. This pathway ensures that mitosis does not proceed until all chromosomes are properly aligned and attached contributing to the fidelity of cell division.

Associated diseases and disorders	Mutations or dysregulation in ZWINT have been linked to certain cancers due to its influence on chromosome segregation. Disruptions in ZWINT function might also contribute to chromosomal instability which can lead to tumorigenesis. In cancerous contexts proteins such as Mad2 and BubR1 which are part of the spindle assembly checkpoint pathway also show altered interactions highlighting a complex network of regulatory proteins involved in maintaining cellular homeostasis.

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

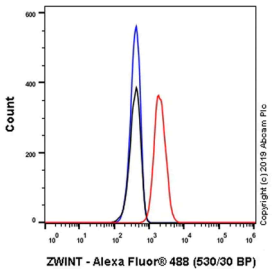
We do not recommend this combination. It is not covered by our product promise.

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.

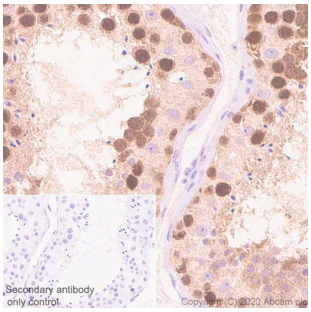
5 product images



Flow Cytometry (Intracellular) - Anti-ZWINT antibody [EPR23440-96] (ab252950)

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

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling ZWINT with ab252950 at 1/500 dilution (0.1µg) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabeled 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.

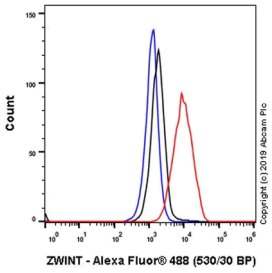


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ZWINT antibody [EPR23440-96] (ab252950)

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

Immunohistochemical analysis of paraffin-embedded human testis tissue labeling ZWINT with ab252950 at 1/250 dilution (1.784 µg/ml) dilution followed by ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining in human testis tissue is observed (PMID: 22023800). The section was incubated with ab252950 for 10 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 ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

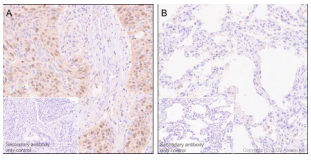
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Flow Cytometry (Intracellular) - Anti-ZWINT antibody [EPR23440-96] (ab252950)

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

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized MOLT-4 (Human lymphoblastic leukemia T lymphoblast) cells labeling ZWINT with ab252950 at 1/500 dilution (0.1µg) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabeled 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.



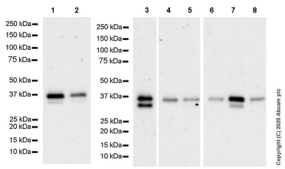
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ZWINT antibody [EPR23440-96] (ab252950)

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

Immunohistochemical analysis of paraffin-embedded human lung cancer (Panel A) and its adjacent noncancerous tissue (Panel B) tissue labeling ZWINT with ab252950 at 1/250 dilution

(1.784 ug/ml) dilution followed by ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining in human lung cancer tissue is observed (Panel A) while neagtive staining is observed in its adjacent non-cancerous tissue (Panel B) (PMID: 29615843). The section was incubated with ab252950 for 10 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 ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Western blot - Anti-ZWINT antibody [EPR23440-96] (ab252950)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
The positive bands are consistent with two isoforms and literature (PMID:23979716, 29440916).

Exposure time: 3 minutes.

All lanes:
Western blot - Anti-ZWINT antibody [EPR23440-96] (ab252950) at 1/1000 dilution

Lane 1:
Raji (human Burkitts lymphoma B lymphocyte), whole cell lysate at 20 µg

Lane 2:
MOLT-4 (human lymphoblastic leukemia T lymphoblast), whole cell lysate at 20 µg

Lane 3:
PC-3 (human prostate adenocarcinoma epithelial cell), whole cell lysate at 20 µg

Lane 4:
NIH:OVCAR-3 (human ovary adenocarcinoma epithelial cell), whole cell lysate at 20 µg

Lane 5:
SW480 (human colorectal adenocarcinoma epithelial cell), whole cell lysate at 20 µg

Lane 6:
A549 (human lung carcinoma epithelial cell), whole cell lysate at 10 µg

Lane 7:
HeLa (human cervix adenocarcinoma epithelial cell), whole cell lysate at 20 µg

Lane 8:
A431 (human epidermoid carcinoma epithelial cell), whole cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/100000 dilution

Predicted band size: 31 kDa

Observed band size: 30 kDa, 36 kDa

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