abcam

ab273052

Anti-ZWINT antibody [EPR23440-96] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR23440-96
Purification technique	Affinity purification Protein A
Concentration	1.008 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

Expected

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

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
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 Blue Ice

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab273052 is the carrier-free version of ab252950.

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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

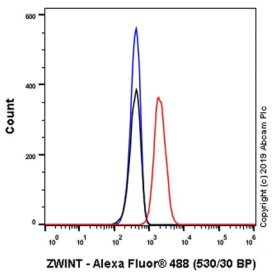
We do not recommend this combination. It is not covered by our product promise.

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.

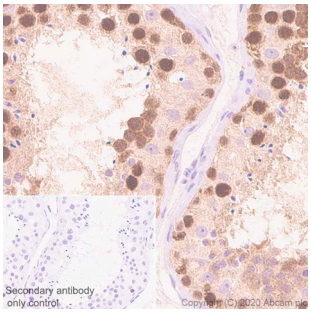
4 product images



Flow Cytometry (Intracellular) - Anti-ZWINT antibody [EPR23440-96] - BSA and Azide free (ab273052)

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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab252950).



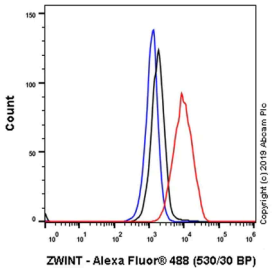
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ZWINT antibody [EPR23440-96] - BSA and Azide free (ab273052)

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.

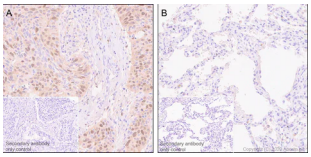
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Flow Cytometry (Intracellular) - Anti-ZWINT antibody [EPR23440-96] - BSA and Azide free (ab273052)

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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab252950).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ZWINT antibody [EPR23440-96] - BSA and Azide free (ab273052)

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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab252950).

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