abcam

ab184950

Anti-Emi1 antibody [EPR15320]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 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	EPR15320
Purification technique	Affinity purification Protein A
Concentration	0.931 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

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

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/250
Notes	-

Predicted

Species	Mouse, Rat
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.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Tested

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

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information FBXO5

Function

Regulator of APC activity during mitotic and meiotic cell cycle (PubMed:16921029, PubMed:17234884, PubMed:17485488, PubMed:17875940, PubMed:23708001, PubMed:23708605). During mitotic cell cycle plays a role as both substrate and inhibitor of APC-FZR1 complex (PubMed:16921029, PubMed:17234884, PubMed:17485488, PubMed:17875940, PubMed:23708001, PubMed:23708605, PubMed:29875408). During G1 phase, plays a role as substrate of APC-FZR1 complex E3 ligase (PubMed:29875408). Then switches as an inhibitor of APC-FZR1 complex during S and G2 leading to cell-cycle commitment (PubMed:29875408). As APC inhibitor, prevents the degradation of APC substrates at multiple levels: by interacting with APC and blocking access of APC substrates to the D-box coreceptor, formed by FZR1 and ANAPC10; by suppressing ubiquitin ligation and chain elongation by APC by preventing the UBE2C and UBE2S activities (PubMed:16921029, PubMed:23708001, PubMed:23708605). Plays a role in genome integrity preservation by coordinating DNA replication with mitosis through APC inhibition in interphase to stabilize CCNA2 and GMNN in order to promote mitosis and prevent rereplication and DNA damage-induced cellular senescence (PubMed:17234884, PubMed:17485488, PubMed:17875940). During oocyte maturation, plays a role in meiosis through inactivation of APC-FZR1 complex. Inhibits APC through RPS6KA2 interaction that increases FBXO5 affiniy for CDC20 leading to the metaphase arrest of the second meiotic division before fertilization (By similarity). Controls entry into the first meiotic division through inactivation of APC-FZR1 complex (By similarity). Promotes migration and osteogenic differentiation of mesenchymal stem cells (PubMed:29850565).

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	Emi1 also known as FBXO5 is a regulatory protein involved in cell cycle control with a molecular mass of approximately 48 kDa. It functions by inhibiting the anaphase-promoting complex/cyclosome (APC/C) an important E3 ubiquitin ligase that tags proteins for degradation during mitosis. Emi1 is expressed in a variety of tissues including those with actively dividing cells like bone marrow and lymph nodes. The regulatory role of Emi1 ensures the proper timing of mitosis preventing premature progression to anaphase.
Biological function summary	Emi1 serves as an essential cell cycle regulator by controlling the activity of the APC/C therefore maintaining genomic stability during cell division. It acts independently not as part of a larger protein complex ensuring that cyclin B and securin levels remain sufficient to hold the cell in metaphase until all chromosomes are correctly attached to the spindle apparatus. This function prevents chromosomal instability and aneuploidy which can lead to malignancies.
Pathways	Emi1 plays a critical role in the cell cycle regulatory network by interacting with the APC/C complex. By regulating the degradation of cell cycle proteins Emi1 helps maintain the balance between cell proliferation and apoptosis. The regulatory influence of Emi1 on the APC/C involves interactions with Cdc20 and Cdh1 two key

activators of APC/C which ensures proper cell cycle progression and checkpoint control.

Associated diseases and disorders

Alterations in Emi1 expression or function can contribute to the development of cancer and other proliferative disorders. Emi1 overexpression is frequently found in many cancers including breast and prostate cancer where it contributes to unchecked cell proliferation. Through its interaction with the APC/C complex aberrant Emi1 activity can disrupt normal cell cycle control mechanisms leading to tumorigenesis. The protein's role in preventing APC/C-mediated degradation also makes it a connecting factor to proteins like cyclin B linking Emi1 to processes involved in oncogenesis.

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

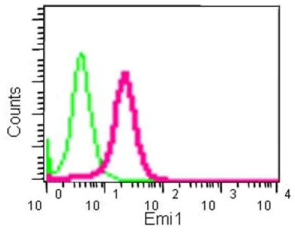
We do not recommend this combination. It is not covered by our product promise.

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

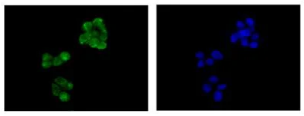


Flow Cytometry (Intracellular) - Anti-Emi1 antibody [EPR15320] (ab184950)

Emi1 Flow Cytometry (Intracellular) staining using rabbit Anti-Emi1 antibody

Intracellular flow cytometric analysis of HeLa cells (2% paraformaldehyde-fixed) labeling Emi1with ab184950 at 1/180 dilution (red). Goat anti-rabbit IgG (FITC) at 1/150 dilution was used

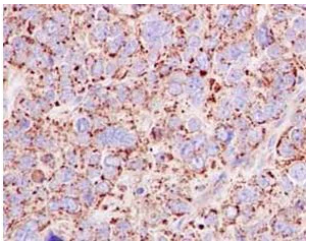
as the secondary antibody. Rabbit monoclonal IgG was used as the isotype control (green).



Immunocytochemistry/ Immunofluorescence - Anti-Emi1 antibody [EPR15320] (ab184950)

Emi1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Emi1 antibody

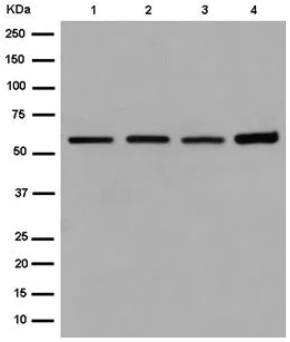
Immunofluorescent analysis of HepG2 cells (4% paraformaldehyde-fixed) labeling Emi1 with ab184950 at 1/250 dilution. Goat anti-rabbit IgG (Alexa Fluor® 488) at 1/200 dilution was used as the secondary antibody. The slide on the right is counter stained with Dapi (blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Emi1 antibody [EPR15320] (ab184950)

Emi1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Emi1 antibody

Immunohistochemical analysis of paraffin-embedded Human ovarian carcinoma tissue labeling Emi1 with ab184950 at 1/250 dilution followed by pre-diluted HRP-conjugated secondary antibody and counter-stained with Hematoxylin.
Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.



Western blot - Anti-Emi1 antibody [EPR15320] (ab184950)

Emi1 Western blot staining using rabbit Anti-Emi1 antibody

All lanes:
Western blot - Anti-Emi1 antibody [EPR15320] (ab184950) at 1/5000 dilution

Lane 1:
K562 cell lysate at 20 µg

Lane 2:
HeLa cell lysate at 20 µg

Lane 3:
293 cell lysate at 20 µg

Lane 4:
HepG2 cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 50 kDa

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