abcam

ab313582

Anti-Annexin V/ANXA5 antibody [EPR28047-61] - BSA and Azide free

Recombinant | RabMAb | KO Validated

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	EPR28047-61
Purification technique	Affinity purification Protein A
Concentration	1.031 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human, Mouse, Recombinant fragment - Human
Dilution info	-

Notes	-

Not recommended

Species	Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human, Mouse
Dilution info	-
Notes	-

Not recommended

Species	Recombinant fragment - Human, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human, Mouse
Dilution info	-
Notes	-

Not recommended

Species	Rat, Recombinant fragment - Human
Dilution info	-
Notes	-

IP

Not recommended

Species	Mouse, Human, Recombinant fragment - Human, Rat
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Mouse, Human, Recombinant fragment - Human, Rat
Dilution info	-
Notes	-

IHC-Fr

Not recommended

Species	Mouse, Human, Recombinant fragment - Human, Rat
Dilution info	-
Notes	-

Target data

See full target information Anxa5

Function	This protein is an anticoagulant protein that acts as an indirect inhibitor of the thromboplastin-specific complex, which is involved in the blood coagulation cascade.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab313582 is the carrier-free version of ab313581.

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	Annexin V also known as ANXA5 is a protein with a mass of approximately 35-36 kDa. This protein belongs to the annexin family which includes proteins capable of binding to phospholipids in a calcium-dependent manner. Annexin V is mostly expressed in placental tissue though it can be found in various other tissues like the vascular endothelium. Researchers often utilize annexin V for staining dead cells or identifying apoptosis using assays such as annexin V FITC or 7-AAD staining. It forms part of the annexin V binding buffer which enhances its binding affinity.
Biological function summary	Annexin V has an important role in cell membrane dynamics and signaling. The protein does not function as part of a larger complex but its ability to bind negatively charged phospholipids like phosphatidylserine makes it important in apoptosis. During apoptosis phosphatidylserine translocates to the outer leaflet of the plasma membrane where annexin V marks these apoptotic cells. This property enables annexin V-based assays to detect early stages of apoptosis.

Pathways	Annexin V involvement is seen in pathways associated with blood coagulation and apoptosis. In the apoptosis pathway annexin V interacts with apoptotic markers to identify dying cells. It relates to proteins such as caspases which are key executors of apoptosis. In coagulation annexin V has been shown to interact with prothrombinase complex and can affect calcium ion concentration thereby influencing blood clotting processes.
Associated diseases and disorders	Annexin V plays a role in antiphospholipid syndrome and cardiovascular diseases. Annexin V has been researched for its connection to antiphospholipid antibodies where it affects normal annexin V function impacting clot formation. In cardiovascular diseases annexin V can interact with proteins such as thrombomodulin influencing thrombotic and atherosclerotic pathways. Understanding these interactions helps researchers develop potential therapeutic approaches for related conditions.

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

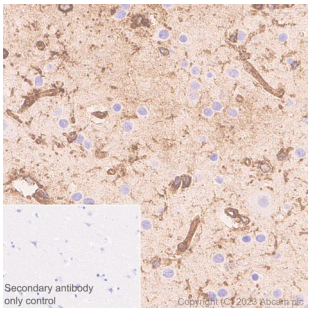
We do not recommend this combination. It is not covered by our product promise.

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.

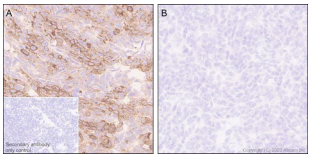
Full details and terms and conditions can be found here:
Terms & Conditions.

13 product images



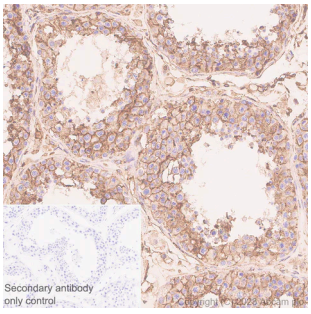
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Annexin V/ANXA5 antibody [EPR28047-61] - BSA and Azide free (ab313582)

This data was developed using ab313581, the same antibody clone in a different buffer formulation. Immunohistochemical analysis of paraffin-embedded Human cerebrum tissue labeling Annexin V/ANXA5 with ab313581 at 1/10000 (0.049 µg/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on human cerebrum. The section was incubated with ab313581 for 30 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 a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



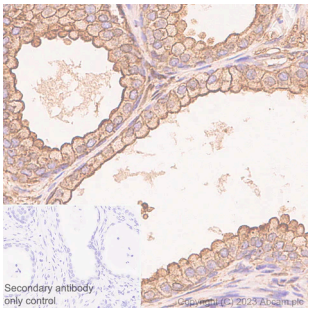
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This data was developed using the same antibody clone in a different buffer formulation (ab313581). Immunohistochemical analysis of paraffin-embedded (A) Wild-type HAP1 (human chronic myelogenous leukemia near-haploid cell) cell pellet and (B) ANXA5 knockout HAP1 cell pellet tissue labelling ANXA5 with ab313581 at 1/10000 (0.049 µg/ml) followed by a ready to use secondary antibody LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on (A) Wild-type HAP1 cell pellet and negative staining on (B) ANXA5 knockout HAP1 cell pellet. The section was incubated with ab313581 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with hematoxylin. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Annexin V/ANXA5 antibody [EPR28047-61] - BSA and Azide free (ab313582)

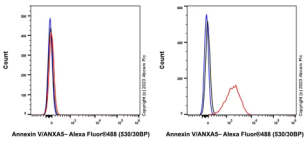
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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Annexin V/ANXA5 antibody [EPR28047-61] - BSA and Azide free (ab313582)

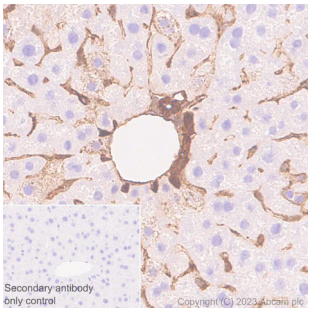
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was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



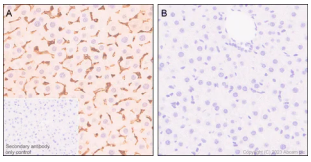
Flow Cytometry (Intracellular) - Anti-Annexin V/ANXA5 antibody [EPR28047-61] - BSA and Azide free (ab313582)

This data was developed using ab313581, the same antibody clone in a different buffer formulation. Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized ANXA5 KO HAP1 (human ANXA5 knockout chronic myelogenous leukemia near-haploid cell, Left) / parental HAP1 (Right) cells labelling Annexin V/ANXA5 with ab313581 at 1/500 dilution (0.1 ug)/Red (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Annexin V/ANXA5 antibody [EPR28047-61] - BSA and Azide free (ab313582)

This data was developed using ab313581, the same antibody clone in a different buffer formulation. Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling Annexin V/ANXA5 with ab313581 at 1/10000 (0.049 µg/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on mouse liver. The section was incubated with ab313581 for 30 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 a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



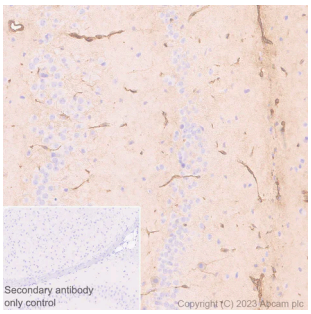
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This data was developed using the same antibody clone in a different buffer formulation (ab313581).

Immunohistochemical analysis of paraffin-embedded (A) Liver tissue from wild-type C57BL/6J mice and (B) Liver tissue from ANXA5 knockout mice tissue labelling ANXA5 with ab313581 at 1/10000 (0.049 µg/ml) followed by a ready to use secondary antibody LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on (A) liver tissue from wild-type C57BL/6J mice and no staining on (B) liver tissue from ANXA5 knockout mice. The section was incubated with ab313581 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with hematoxylin.

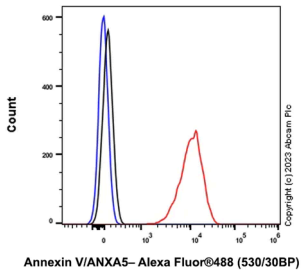
Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.

The tissue samples were kindly provided by GemPharmatech. C57BL/6JGpt wildtype mice and Annexin A5-KO homozygous mice (Strain ID: T028565).



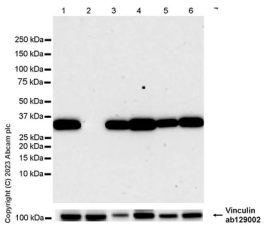
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Flow Cytometry (Intracellular) - Anti-Annexin V/ANXA5 antibody [EPR28047-61] - BSA and Azide free (ab313582)

This data was developed using ab313581, the same antibody clone in a different buffer formulation. Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized NIH/3T3 (mouse embryonic fibroblast) cells labelling Annexin V/ANXA5 with ab313581 at 1/500 dilution (0.1 ug)/Red (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Western blot - Anti-Annexin V/ANXA5 antibody [EPR28047-61] - BSA and Azide free (ab313582)

Annexin V/ANXA5 Western blot staining using rabbit Anti-Annexin V/ANXA5 antibody

This data was developed using ab313581, the same antibody clone in a different buffer formulation. Blocking and diluting buffer and concentration: 5% NFDM/TBST Performed under reducing conditions. In Western blot, ab313581 was shown to bind specifically to ANXA5. A band was observed at 35 kDa in wild-type HAP1 cell lysates whereas loss of signal was observed in the ANXA5 knockout cell line. In Western blot, Anti-Vinculin antibody [EPR8185] (ab129002) staining at 1/10000 dilution. Exposure time: 180 seconds
All lanes:
Western blot - Anti-Annexin V/ANXA5 antibody [EPR28047-61] (ab313581) at 1/1000 dilution

Lane 1:
Wild-type HAP1(human chronic myelogenous leukemia near-haploid cell line) whole cell lysate at 20 µg

Lane 2:
ANXA5 knockout HAP1 whole cell lysate at 20 µg

Lane 3:
Human liver tissue lysate at 20 µg

Lane 4:
Human testis tissue lysate at 20 µg

Lane 5:
Mouse liver tissue lysate at 20 µg

Lane 6:

Mouse testis tissue lysate at 20 µg

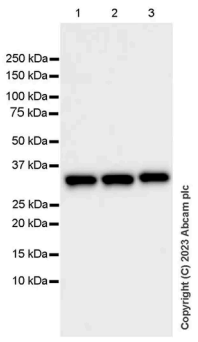
Secondary

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

Performed under reducing conditions.

Observed band size: 35 kDa

Exposure time: 180s



Western blot - Anti-Annexin V/ANXA5 antibody [EPR28047-61] - BSA and Azide free (ab313582)

This data was developed using ab313581, the same antibody clone in a different buffer formulation. Blocking and diluting buffer and concentration: 5% NFDM/TBST The lysates were freshly made and used for Western Blotting immediately to minimize protein degradation.
Exposure time: 26 seconds
All lanes:
Western blot - Anti-Annexin V/ANXA5 antibody [EPR28047-61] (ab313581) at 1/1000 dilution

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

Lane 2:
293T (human embryonic kidney epithelial cell) whole cell lysate at 20 µg

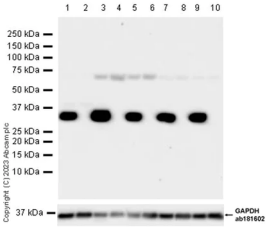
Lane 3:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 20 µg

Secondary

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

Observed band size: 35 kDa

Exposure time: 26s



Western blot - Anti-Annexin V/ANXA5 antibody [EPR28047-61] - BSA and Azide free (ab313582)

Blocking buffer and concentration: 5% NFDM/TBST. Diluting buffer and concentration: 5% NFDM/TBST. The identity of the bands above 50 kDa is unknown. ab181602 was used as a loading control. This data was developed using the same antibody clone in a different buffer formulation (ab313581).
All lanes:
Western blot - Anti-Annexin V/ANXA5 antibody [EPR28047-61] (ab313581) at 1/1000 dilution

Lane 1:
Wild-type mouse liver tissue lysate at 20 µg

Lane 2:
Anxa5 knockout mouse liver tissue lysate at 20 µg

Lane 3:

Wild-type mouse lung tissue lysate at 20 µg

Lane 4:
Anxa5 knockout mouse lung tissue lysate at 20 µg

Lane 5:
Wild-type mouse heart tissue lysate at 20 µg

Lane 6:
Anxa5 knockout mouse heart tissue lysate at 20 µg

Lane 7:
Wild-type mouse kidney tissue lysate at 20 µg

Lane 8:
Anxa5 knockout mouse kidney tissue lysate at 20 µg

Lane 9:
Wild-type mouse colon tissue lysate at 20 µg

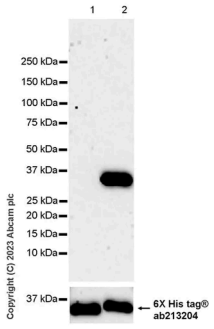
Lane 10:
Anxa5 knockout mouse colon tissue lysate at 20 µg

Secondary

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

Observed band size: 26 kDa

Exposure time: 35s



Western blot - Anti-Annexin V/ANXA5 antibody [EPR28047-61] - BSA and Azide free (ab313582)

This data was developed using ab313581, the same antibody clone in a different buffer formulation. Blocking and diluting buffer and concentration: 5% NFDM/TBST This antibody does not cross-react with human ANXA4. In Western blot, Anti-6X His tag® antibody [EPR20547] - ChIP Grade (ab213204) staining at 1/5000 dilution Exposure time: 180 seconds
All lanes:
Western blot - Anti-Annexin V/ANXA5 antibody [EPR28047-61] (ab313581) at 1/1000 dilution

Lane 1:
His-tagged human ANXA4 recombinant protein at 10 ng

Lane 2:
His-tagged human ANXA5 recombinant protein at 10 ng

Secondary

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

Observed band size: 35 kDa

Exposure time: 180s

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