abcam

ab108194

Anti-Annexin V/ANXA5 antibody [EPR3980]

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), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR3980
Purification technique	Affinity purification Protein A
Specificity	The immunogen used for this product shares 80% homology with ANXA2 and 73% homology with ANXA4. Cross-reactivity with this protein has not been confirmed experimentally.
Concentration	0.271 - 0.283 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse
Dilution info	1/10000 - 1/50000

Notes	-

Species	Rat
Dilution info	1/10000 - 1/50000
Notes	-

Species	Human
Dilution info	1/10000 - 1/50000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	**For unpurified use at 1/500 - 1/1000.**

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/30
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. **For unpurified use at 1/100 - 1/1000.**

Expected

Species	Mouse, Rat

Dilution info	Use at an assay dependent concentration.
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	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	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

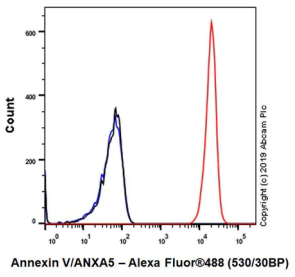
We do not recommend this combination. It is not covered by our product promise.

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.

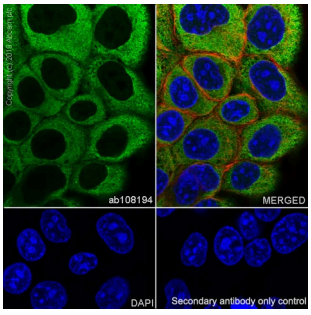
5 product images



Flow Cytometry (Intracellular) - Anti-Annexin V/ANXA5 antibody [EPR3980] (ab108194)

Annexin V/ANXA5 Flow Cytometry (Intracellular) staining using rabbit Anti-Annexin V/ANXA5 antibody

Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labelling Annexin V/ANXA5 with purified ab108194 at 1/30 dilution (10 µg/ml) (red). Cells were fixed with 80% Methanol and permeabilised with 0.1% Tween-20. A Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150081) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (black). Unlabelled control - Cell without incubation with primary antibody and secondary antibody (blue).

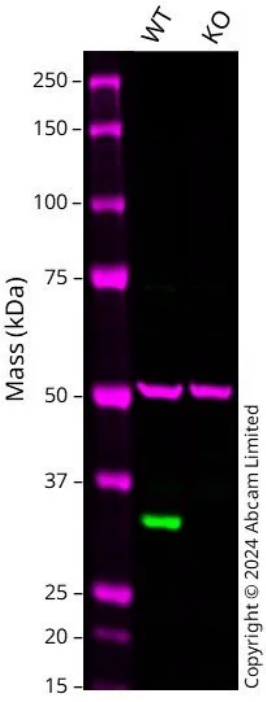


Immunocytochemistry/ Immunofluorescence - Anti-Annexin V/ANXA5 antibody [EPR3980] (ab108194)

Annexin V/ANXA5 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Annexin V/ANXA5 antibody

Immunocytochemistry analysis of JAR (Human placenta choriocarcinoma epithelial cell) cells labeling Annexin V/ANXA5 with purified ab108194 at 1:50 dilution (2.2 µg/ml). Cells were fixed in 100% Methanol and permeabilized with 0.1% tritonX-100. Cells were counterstained with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at 1/200 dilution (2.5 µg/ml) (ab195889) (red). Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as a nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.

Western blot - Anti-Annexin V/ANXA5 antibody [EPR3980] (ab108194)



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

Western blot: Anti-ANXA5 antibody [EPR3980] (ab108194) staining at 1/10000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] (ab7291) loading control staining at 1/20000 dilution, shown in magenta. In Western blot, ab108194 was shown to bind specifically to ANXA5. A band was observed at 36 kDa in wild-type A549 cell lysates with no signal observed at this size in ANXA5 knockout cell line. To generate this image, wild-type and ANXA5 knockout A549 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.
All lanes:
Western blot - Anti-Annexin V/ANXA5 antibody [EPR3980] (ab108194) at 1/10000 dilution

Lane 1:
Wild-type A549 cell lysate at 20 µg

Lane 2:
ANXA5 knockout A549 cell lysate at 20 µg

Secondary

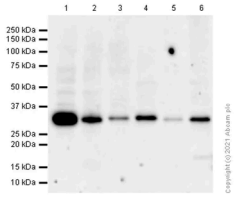
Lanes 1 - 2:
Goat anti-Rabbit IgG H&L 800CW at 1/20000 dilution

Lanes 1 - 2:
Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution

Performed under reducing conditions.

Observed band size: 36 kDa

Western blot - Anti-Annexin V/ANXA5 antibody [EPR3980] (ab108194)



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

All lanes:
Western blot - Anti-Annexin V/ANXA5 antibody [EPR3980] (ab108194) at 1/10000 dilution

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

Lane 2:
Jurkat (Human T cell leukemia T lymphocyte) whole cell lysate at 20 µg

Lane 3:
Mouse brain at 20 µg

Lane 4:
Mouse heart at 20 µg

Lane 5:
Rat brain at 20 µg

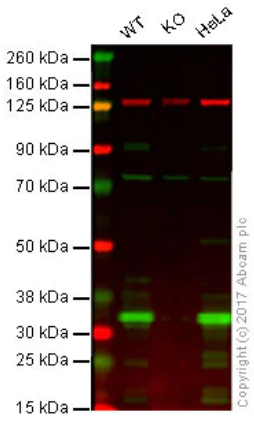
Lane 6:
Rat heart at 20 µg

Secondary

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

Predicted band size: 35 kDa

Observed band size: 36 kDa



Western blot - Anti-Annexin V/ANXA5 antibody [EPR3980] (ab108194)

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

Lane 1: Wild-type HAP1 whole cell lysate (20 µg)
Lane 2: Annexin V knockout HAP1 whole cell lysate (20 µg)
Lane 3: HeLa whole cell lysate (20 µg)
Lanes 1 - 3: Merged signal (red and green). Green - ab108194 observed at 35 kDa. Red - loading control, ab18058, observed at 130 kDa.

ab108194 was shown to recognize Annexin V in wild-type cells as signal was lost at the expected MW in Annexin V knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and Annexin V knockout samples were subjected to SDS-PAGE. ab108194 and ab18058 (Mouse anti-Vinculin loading control) were incubated overnight at 4°C at 1/10000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ab216776 secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-Annexin V/ANXA5 antibody [EPR3980] (ab108194)

Predicted band size: 35 kDa

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