abcam

ab178677

Anti-Annexin-2/ANXA2 antibody [EPR13052(B)]

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	EPR13052(B)
Purification technique	Affinity purification Protein A
Concentration	0.223 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/20000
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

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

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information ANXA2

Function Calcium-regulated membrane-binding protein whose affinity for calcium is greatly enhanced by anionic phospholipids. It binds two calcium ions with high affinity. May be involved in heat-stress response. Inhibits PCSK9-enhanced LDLR degradation, probably reduces PCSK9 protein levels via a translational mechanism but also competes with LDLR for binding with PCSK9 (PubMed:18799458, PubMed:22848640, PubMed:24808179). Binds to endosomes damaged by phagocytosis of particulate wear debris and participates in endosomal membrane stabilization, thereby limiting NLRP3 inflammasome activation (By similarity). Required for endothelial cell surface plasmin generation and may support fibrinolytic surveillance and neoangiogenesis (By similarity). (Microbial infection) Binds M.pneumoniae CARDS toxin, probably serves as one receptor for this pathogen. When ANXA2 is down-regulated by siRNA, less toxin binds to human cells and less vacuolization (a symptom of M.pneumoniae infection) is seen.

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-2 also known as ANXA2 is a multifunctional protein of approximately 36 kDa. It belongs to the annexin family and is known for its strong calcium-dependent interactions with phospholipid membranes. Commonly expressed in endothelial cells it also appears in various tissues including epithelial cells and certain types of cancer cells. ANXA2 forms a heterotetramer complex with S100A10 also known as p11 which modulates its availability and function. Other names for ANXA2 include its gene designation M298 and its role in complexes often goes by ANXA2R.
Biological function summary	Annexin-2 acts beyond mere cellular structural support. It plays a part in fibrinolysis by acting as a co-receptor for plasminogen and tissue plasminogen activator promoting plasmin generation. The protein is also implicated in membrane trafficking signal transduction and organization of microdomains on cellular surfaces. As part of a complex with S100A10 ANXA2 can bind to cytoskeletal elements facilitating vesicle trafficking and influencing cell shape and motility. This complex assembly hints at ANXA2's importance in maintaining cellular dynamism and interplay with external signals.

Pathways	ANXA2 is integral in the regulation of the plasminogen activation pathway important for fibrinolytic activity. It also participates in the signal transduction pathways influencing cellular responses to stress and growth factors. ANXA2 interacts with various proteins like Src kinase and is involved in processes like the EGFR signaling pathway. This protein often crosstalks with the cytoskeletal network enabling the coupling of membrane dynamics with intracellular signaling cascades.
Associated diseases and disorders	Annexin-2's dysregulation associates with conditions such as cancer and thrombosis. In cancer overexpression of ANXA2 links with tumor progression invasion and metastasis acting synergistically with proteins like Src to promote oncogenic pathways. In thrombosis ANXA2's role in fibrinolysis becomes impaired contributing to excessive clot formation. Studies also indicate interactions with plasminogen-related proteins as being central to understanding its pathological roles in these diseases.

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

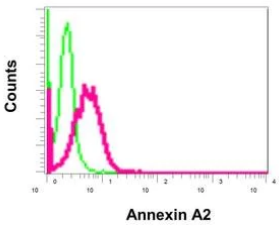
We do not recommend this combination. It is not covered by our product promise.

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.

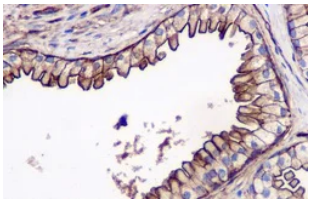
5 product images



Flow Cytometry (Intracellular) - Anti-Annexin-2/ANXA2 antibody [EPR13052(B)] (ab178677)

Annexin-2/ANXA2 Flow Cytometry (Intracellular) staining using rabbit Anti-Annexin-2/ANXA2 antibody

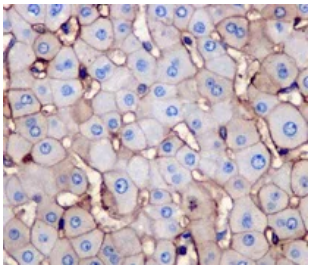
Intracellular flow cytometric analysis of permeabilized K562 cells labeling Annexin-2/ANXA2 with ab178677 at 1/10 dilution (red) or a rabbit IgG (negative) (green).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Annexin-2/ANXA2 antibody [EPR13052(B)] (ab178677)

Annexin-2/ANXA2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Annexin-2/ANXA2 antibody

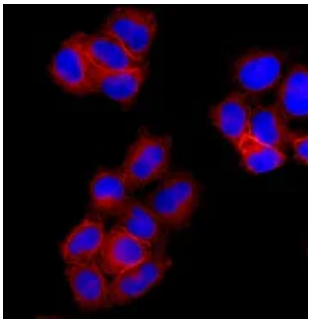
Immunohistochemical analysis of paraffin-embedded Human prostate tissue labeling Annexin-2/ANXA2 with ab178677 at 1/50 dilution.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Annexin-2/ANXA2 antibody [EPR13052(B)] (ab178677)

Annexin-2/ANXA2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Annexin-2/ANXA2 antibody

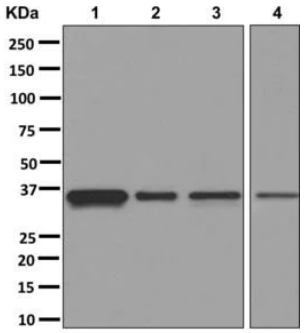
Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling Annexin-2/ANXA2 with ab178677 at 1/50 dilution.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Annexin-2/ANXA2 antibody [EPR13052(B)] (ab178677)

Annexin-2/ANXA2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Annexin-2/ANXA2 antibody

Immunofluorescent analysis of HeLa cells labeling Annexin-2/ANXA2 with ab178677 at 1/100 dilution (red). DAPI nuclear staining (blue).



Western blot - Anti-Annexin-2/ANXA2 antibody [EPR13052(B)] (ab178677)

Annexin-2/ANXA2 Western blot staining using rabbit Anti-Annexin-2/ANXA2 antibody

Exposure time
Lanes 1-3: 1 minute
Lane 4: 3 minutes
Lanes 1 - 3:
Western blot - Anti-Annexin-2/ANXA2 antibody [EPR13052(B)] (ab178677) at 1/20000 dilution

Lane 4:
Western blot - Anti-Annexin-2/ANXA2 antibody [EPR13052(B)] (ab178677) at 1/5000 dilution

Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
SKBR-3 cell lysate at 10 µg

Lane 3:
K562 cell lysate at 10 µg

Lane 4:
HepG2 cell lysate at 10 µg

Predicted band size: 38 kDa

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