abcam

ab225513

Alexa Fluor® 488 Anti-Annexin A1/ANXA1 antibody [EPR19342]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR19342
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Mouse
Dilution info	1/100
Notes	This product gave a positive signal in NIH3T3 cells fixed with 4% formaldehyde (10 min) and 100% methanol (5 min)

Expected

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

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/5000
Notes	-

Expected

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

IHC-P

Tested

Species	Human
Dilution info	1/100
Notes	-

Species	Mouse
Dilution info	1/100
Notes	-

Species	Rat
Dilution info	1/100
Notes	-

Target data

See full target information ANXA1

Function	Plays important roles in the innate immune response as effector of glucocorticoid-mediated responses and regulator of the inflammatory process. Has anti-inflammatory activity (PubMed:8425544). Plays a role in glucocorticoid-mediated down-regulation of the early phase of the inflammatory response (By similarity). Contributes to the adaptive immune response by enhancing signaling cascades that are triggered by T-cell activation, regulates differentiation and proliferation of activated T cells (PubMed:17008549). Promotes the differentiation of T cells into Th1 cells and negatively regulates differentiation into Th2 cells (PubMed:17008549). Has no effect on unstimulated T cells (PubMed:17008549). Negatively regulates hormone exocytosis via activation of the formyl peptide receptors and reorganization of the actin cytoskeleton (PubMed:19625660). Has high affinity for Ca(2+) and can bind up to eight Ca(2+) ions (By similarity). Displays Ca(2+)-dependent binding to phospholipid membranes (PubMed:2532504, PubMed:8557678). Plays a role in the formation of phagocytic cups and phagosomes. Plays a role in phagocytosis by mediating the Ca(2+)-dependent interaction between phagosomes and the actin cytoskeleton (By similarity). In the context of antitumor immunity, interacts with FPR1 on dendritic cells allowing for tumor-associated antigens uptake and cross-presentation to T cells to mount an antitumor specific T cell response. Annexin Ac2-26. Functions at least in part by activating the formyl peptide receptors and downstream signaling cascades (PubMed:15187149, PubMed:22879591, PubMed:25664854). Promotes chemotaxis of granulocytes and monocytes via activation of the formyl peptide receptors (PubMed:15187149). Promotes rearrangement of the actin cytoskeleton, cell polarization and cell migration (PubMed:15187149). Promotes resolution of inflammation and wound healing (PubMed:25664854). Acts via neutrophil N-formyl peptide receptors to enhance the release of CXCL2 (PubMed:22879591).

Storage

Shipped at conditions	Blue Ice
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, Store in the dark

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.

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Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Annexin A1 also known as ANXA1 or annexin 1 is a multifunctional protein with a molecular mass of approximately 37 kDa. This protein belongs to the annexin family and is distributed widely in various tissue types including the central nervous system respiratory system and immune cells. Annexin A1 functions by binding to phospholipids in a calcium-dependent manner influencing membrane-related processes and signal transduction. Its expression can be examined using techniques like annexin A1 immunohistochemistry and annexin A1 ELISA to study protein localization and concentration.
Biological function summary	Annexin A1 is involved in modulating inflammatory responses and cell proliferation. It acts as a mediator in the resolution of inflammation by promoting apoptotic cell clearance and regulating leukocyte migration. Annexin A1 participates in complex interactions often associating with cell membrane

	phospholipids to exert its effects. It contributes significantly to cell adhesion migration and intracellular signaling events which are important for maintaining homeostasis and proper immune function.
Pathways	Annexin A1 plays a significant role in the glucocorticoid signaling pathway and the formation of the cytoskeleton. It interacts with proteins like lipocortin 1 and phospholipase A2 impacting processes such as arachidonic acid metabolism and cytoskeletal reorganization. These interactions underline annexin A1's involvement in regulating inflammation and maintaining cellular architecture linking it to cellular processes that govern stress responses and cell movement.
Associated diseases and disorders	Annexin A1 exhibits relevance to inflammatory diseases and cancer. It has been implicated in conditions such as asthma where it modulates inflammatory cell recruitment and activation. In cancer especially in breast cancer annexin A1 influences tumor progression by interacting with proteins like COX-2 affecting tumor cell invasion and metastasis. The protein's role in these conditions highlights its potential as both a biomarker and therapeutic target helping in understanding disease mechanisms and developing treatment strategies.

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

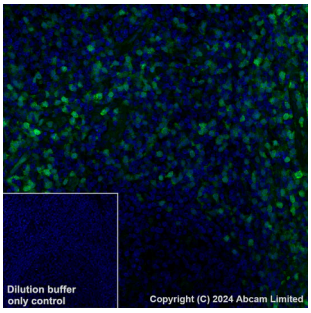
We do not recommend this combination. It is not covered by our product promise.

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.

6 product images

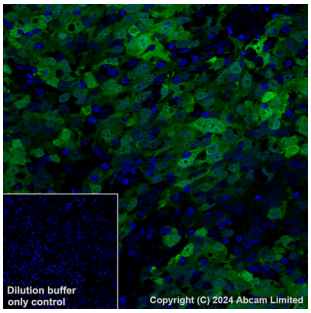


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 488 Anti-Annexin A1/ANXA1 antibody [EPR19342] (ab225513)

Immunohistochemical analysis of paraffin-embedded human tonsil tissue labelling Annexin A1/ANXA1 with ab225513 at 1/100 dilution.

Positive staining on human tonsil.
The section was incubated with ab225513 for 60 mins at room temperature (shown in green).
Nuclear DNA was labeled with DAPI (shown in blue).
The section was then mounted using Fluoromount®.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 40 mins.

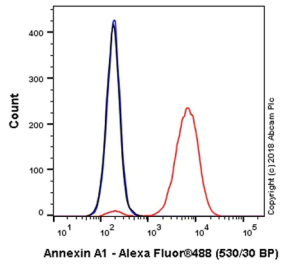


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 488 Anti-Annexin A1/ANXA1 antibody [EPR19342] (ab225513)

Immunohistochemical analysis of paraffin-embedded human bladder cancer labelling Annexin A1/ANXA1 with ab225513 at 1/100 dilution.

Positive staining on human bladder cancer.
The section was incubated with ab225513 for 60 mins at room temperature (shown in green).
Nuclear DNA was labeled with DAPI (shown in blue).
The section was then mounted using Fluoromount®.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 40 mins.



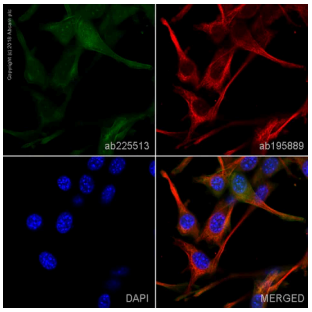
Flow Cytometry (Intracellular) - Alexa Fluor® 488 Anti-Annexin A1/ANXA1 antibody [EPR19342] (ab225513)

Annexin A1/ANXA1 Flow Cytometry (Intracellular) staining using rabbit Anti-Annexin A1/ANXA1 antibody

Overlay histogram showing NIH3T3 cells stained with ab225513 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (ab225513, 1/5000 dilution) for 30 min at 22°C.
Isotype control antibody (black line) was Rabbit IgG (monoclonal) Alexa Fluor® 488 (ab199091) used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 50 mW Blue laser (488nm) and 530/30 bandpass filter.

This antibody gave a positive signal in NIH3T3 cells fixed with 4% formaldehyde (10 min)/permeabilized with 0.1% PBS-Triton X-100 for 15 min used under the same conditions.

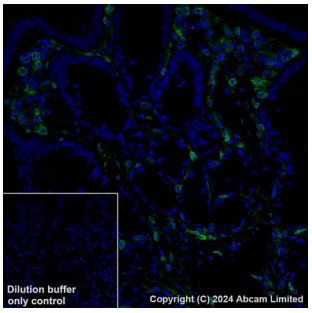


Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-Annexin A1/ANXA1 antibody [EPR19342] (ab225513)

Annexin A1/ANXA1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Annexin A1/ANXA1 antibody

ab225513 staining Annexin A1 in NIH3T3 cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab225513 at 1/100 dilution (shown in green) and ab195889, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 594), at 1/250 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

This product also gave a positive signal under the same testing conditions in NIH3T3 cells fixed with 4% formaldehyde (10 min).

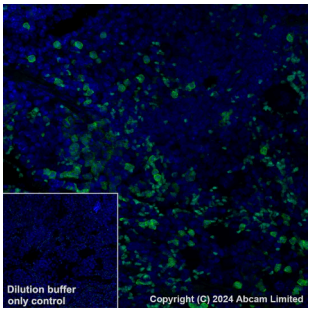


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 488 Anti-Annexin A1/ANXA1 antibody [EPR19342] (ab225513)

Immunohistochemical analysis of paraffin-embedded rat colon labelling Annexin A1/ANXA1 with ab225513 at 1/100 dilution.

Positive staining on rat colon.
The section was incubated with ab225513 for 60 mins at room temperature (shown in green).
Nuclear DNA was labeled with DAPI (shown in blue).
The section was then mounted using Fluoromount®.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 40 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 488 Anti-Annexin A1/ANXA1 antibody [EPR19342] (ab225513)

Immunohistochemical analysis of paraffin-embedded mouse spleen labelling Annexin A1/ANXA1 with ab225513 at 1/100 dilution.

Positive staining on mouse spleen.
The section was incubated with ab225513 for 60 mins at room temperature (shown in green).
Nuclear DNA was labeled with DAPI (shown in blue).
The section was then mounted using Fluoromount®.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 40 mins.

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