abcam

ab131251

Anti-Protein C antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.025% Sodium azide, 0.025% Thimerosal (merthiolate) Constituents: 2.5% BSA, 0.45% Sodium chloride, 0.1% Disodium hydrogenorthophosphate
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Human PROC. The exact immunogen used to generate this antibody is proprietary information. Database link P04070
Purification technique	Affinity purification Immunogen
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	0.5-1 µg/mL
Notes	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

WB

Tested

Species	Human
Dilution info	0.1-0.5 µg/mL
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1-3 µg/cells for 6 µg/cells
Notes	-

Target data

See full target information PROC

Function	Protein C is a vitamin K-dependent serine protease that regulates blood coagulation by inactivating factors Va and VIIIa in the presence of calcium ions and phospholipids (PubMed:25618265, PubMed:39880037). Exerts a protective effect on the endothelial cell barrier function (PubMed:25651845).

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

Supplementary info

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

Activity summary	Protein C is a vitamin K-dependent serine protease enzyme that plays an important role in blood coagulation. It is also known as autoprothrombin IIA or blood coagulation factor XIV. The molecular weight of Protein C is approximately 62 kDa. It is synthesized in the liver and circulates in the plasma as an inactive zymogen. The protein becomes activated on the surface of endothelial cells and platelets where it plays an anticoagulant role.
Biological function summary	Protein C serves as an important regulator in the coagulation pathway. Upon activation it joins with a cofactor known as Protein S to form the activated Protein C complex which inactivates clotting factors Va and VIIIa. This inactivation leads to a reduction in thrombin formation thereby preventing excessive blood clotting. The activated C complex works efficiently on phospholipid surfaces such as those found on cellular membranes.
Pathways	Protein C activation is an important step in the anticoagulant pathway and works to balance the procoagulant actions of other factors. Protein C functions in tandem with proteins such as thrombin which transforms it into its active form when bound to thrombomodulin on the endothelial cell surface. The activated Protein C pathway ensures proper blood flow by preventing unchecked clot propagation and is intricately tied with pathways involving thrombin and factors Va and VIIIa.
Associated diseases and disorders	Protein C deficiency is associated with an increased risk of developing thromboembolic disorders like deep vein thrombosis and pulmonary embolism. Deficiency can be congenital or acquired resulting in uncontrolled coagulation and increased susceptibility to clot formation. Additionally impaired activity of protein C is related to a disorder known as purpura fulminans which is characterized by blood clot formation and skin necrosis. The relation of Protein C to these conditions often involves dysfunctional interactions with factors Va VIIIa and thrombin.

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

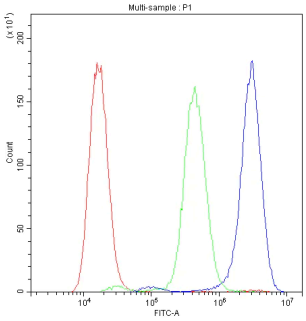
We do not recommend this combination. It is not covered by our product promise.

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.

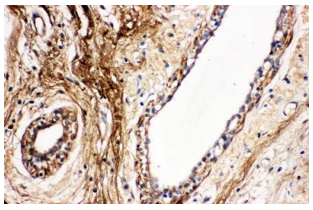
2 product images



Flow Cytometry (Intracellular) - Anti-Protein C antibody (ab131251)

Protein C Flow Cytometry (Intracellular) staining using rabbit Anti-Protein C antibody

Overlay histogram showing A549 cells stained with ab131251 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with ab131251 1µg/1x10^6 cells for 30 min at 20°C. DyLight® 488 conjugated goat anti-rabbit IgG 5-10 µg/1x10^6 cells was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Protein C antibody (ab131251)

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

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) of Protein C using ab131251 at 1µg/ml in human mammary cancer tissues.
Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex with DAB as the chromogen.

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