Datasheet for ABIN7043073

anti-PAR1 antibody (Extracellular)

5 Images

Go to Product page

Overview

Quantity:	25 µL
Target:	PAR1 (F2R)
Binding Specificity:	AA 61-76, Extracellular
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This PAR1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Immunofluorescence (Cultured Cells) (IF (cc)), Live Cell Imaging (LCI), Immunochromatography (IC)

Product Details

Purpose:	A Rabbit Polyclonal Antibody to Protease-Activated Receptor-1
Immunogen:	Immunogen: Synthetic peptide Immunogen Sequence: (C)KNESGLTEYRLVSINK, corresponding to amino acid residues 61-76 of human PAR-1
Isotype:	IgG
Specificity:	Extracellular, N-terminus
Cross-Reactivity (Details):	Unlikely to recognize mouse or rat samples.
Predicted Reactivity:	Monkey - identical

Product Details

Characteristics:	Anti-Human PAR1 (F2R) (extracellular) Antibody (ABIN7043073, ABIN7045102 and ABIN7045103)) is a highly specific antibody directed against an epitope of human protease-activated receptor-1. The antibody can be used in western blot, immunohistochemistry, immunocytochemistry, and live cell flow cytometry applications. It has been designed to recognize PAR-1 from human samples.
Purification:	Affinity purified on immobilized antigen.

Target Details

Target:	PAR1 (F2R)
Alternative Name:	F2R (F2R Products)
Background:	Protease-activated receptor-1, PAR-1, Thrombin receptor, Coagulation factor II receptor, CF2R,Protease-activated receptor 1 (PAR-1) belongs to a family of four G protein-coupled receptors (PAR1-4) that are activated as a result of proteolytic cleavage by certain serine proteases, hence their name. In this novel modality of activation, a specific protease cleaves the PAR receptor within a defined sequence in its extracellular N-terminal domain. This results in the creation of a new N-terminal tethered ligand, which subsequently binds to a site in the second extracellular loop of the same receptor. This binding results in the coupling of the receptor to G proteins and in the activation of several signal transduction pathways.1-3Different PARs are activated by different proteases. Hence, PAR-1 is activated by thrombin (and is in fact also known as the thrombin receptor), as are PAR-3 and PAR-4, while PAR-2 is activated by trypsin.1-3 PAR-1 can be also cleaved and activated by other proteases such as plasmin, Factor Xa, cathepsin G, and others.The intramolecular nature of PAR activation and the continuous presence of the tethered ligand that cannot diffuse away imply the existence of several mechanisms for the rapid termination of PAR signaling. Indeed, following receptor activation, there is rapid phosphorylation of the C-terminal end of the receptor, followed by receptor internalization and degradation. In addition, several proteases can cleave away the tethered ligand, thereby "disarming" the PAR.1-3PAR-1 signals through several G proteins including Gaq, Gai, and Ga12/13, resulting in the activation of several transduction pathways including intracellular Ca2+ mobilization, Rho and Rac signaling, and MAPK activation.1-3PAR-1 is expressed in several cell types including platelets, leukocytes, vascular endothelial cells, gastrointestinal epithelial cells, myocytes, and neurons. The best studied physiological function of PAR-1 is its involvement in the coagulation cascade. Thrombin, the preeminent ligand of PAR-1, activates the receptor on the surface of platelets, hence inducing platelet aggregation, granular secretion, and procoagulant activity. PAR-1 also plays a crucial role in vascular

Target Details

	ontogenesis. Accordingly, PAR-1 knockout mice show bleeding at multiple sites and usually die at mid-gestation.1-3PAR-1 also plays important roles in tumor growth and metastasis. PAR-1 is upregulated in several human cancers as are several proteases such as plasmin and matrix metalloproteases (MMPs) that act as PAR-1 ligands, thereby creating an autocrine loop. PAR-1 activation in cancer cells transmits mitogenic signals through the activation of the erk1/2 pathway and is involved in tumor spread via its pro-angiogenic activity.4 Alternative names: PAR1 (F2R), Protease-activated receptor-1, PAR-1, Thrombin receptor, Coagulation factor II receptor, CF2R
Gene ID:	2149
NCBI Accession:	NM_001992
UniProt:	P25116
Pathways:	Nuclear Receptor Transcription Pathway, Skeletal Muscle Fiber Development, Positive Regulation of Endopeptidase Activity, Protein targeting to Nucleus

Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: 1:100 Application Dilutions Western blot wb: 1:200
Comment:	Cited Application: ICC Negative Control: BLP-PR031 Blocking Peptide: BLP-PR031
Restrictions:	For Research Use only

Handling

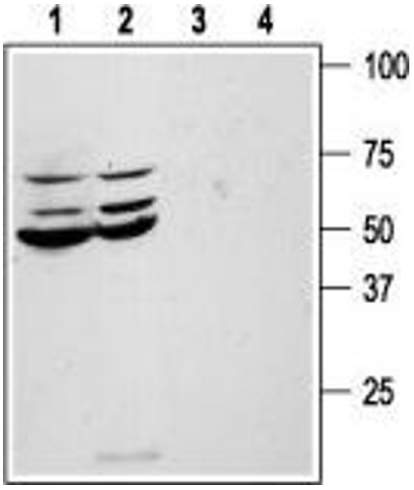
Format:	Lyophilized
Reconstitution:	Recosntitute with double distilled water (DDW) to a concentration of 1.0 mg/mL.
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4
Storage:	4 °C,-20 °C
Storage Comment:	Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature.

Handling

Upon arrival, it should be stored at -20°C.

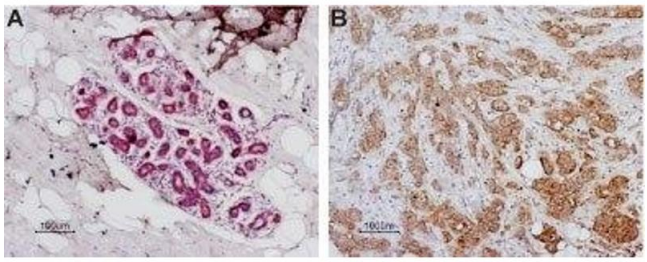
Storage after reconstitution: The reconstituted solution can be stored at 4°C for up to 1 week. For longer periods, small aliquots should be stored at -20°C. Avoid multiple freezing and thawing. Centrifuge all antibody preparations before use (10000 x g 5 min).

Images



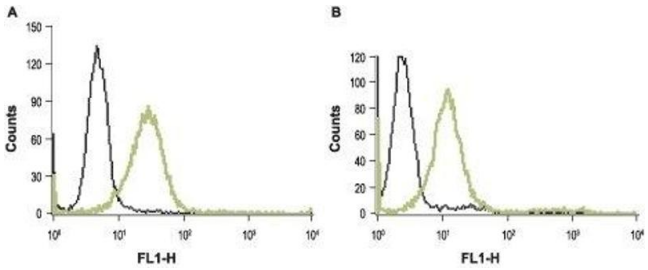
Western Blotting

Image 1. Western blot analysis of human colon cancer HT-29 (lanes 1 and 3) and Colo-205 (lanes 2 and 4) cell line lysates: - 1,2. Anti-Human PAR1 (F2R) (extracellular) Antibody (ABIN7043073, ABIN7045102 and ABIN7045103), (1:200).3,4. Anti-Human PAR1 (F2R) (extracellular) Antibody, preincubated with Human PAR1/F2R (extracellular) Blocking Peptide (#BLP-PR031).



Immunohistochemistry

Image 2. Expression of PAR-1 in normal human breast and human breast carcinoma - Immunohistochemical staining of paraffin-embedded human breast sections using Anti-Human PAR1 (F2R) (extracellular) Antibody (ABIN7043073, ABIN7045102 and ABIN7045103), (1:100). PAR-1 staining is highly specific for epithelium-derived cells. A. In the normal resting breast, epithelial cells of the mammary ducts are visible using Histofine (pink). B. The breast carcinoma contains epithelium-derived malignant cells stained with DAB (brown). Hematoxilin is used as the counterstain.



Flow Cytometry

Image 3. Cell surface detection of PAR-1 in live intact HL-60 (human promyelocytic leukemia) (A) and Jurkat (human T cell leukemia) (B) cell lines: (black line) Unstained cells + FITC-conjugated goat anti-rabbit antibody. (green line) Cells + Anti-Human PAR1 (F2R) (extracellular) Antibody (ABIN7043073, ABIN7045102 and ABIN7045103), (1:20) + FITC-conjugated goat anti-rabbit antibody.

Please check the product details page for more images. Overall 5 images are available for ABIN7043073.