BOSTER BIOLOGICAL TECHNOLOGY
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Anti-P Glycoprotein/ABCB1 Antibody Picoband®

Catalog Number: A00049-4

About ABCB1

P-GP, also called ABCB1 or PGY1, is a glycoprotein that in humans is encoded by the ABCB1 gene. It is mapped to 7q21.12. P-GP is a well-characterized ABC-transporter (which transports a wide variety of substrates across extra- and intracellular membranes) of the MDR/TAP subfamily. It is an important protein of the cell membrane that pumps many foreign substances out of cells. More formally, it is an ATP-dependent drug efflux pump with broad substrate specificity. P-GP is an ATP-dependent drug efflux pump forxenobiotic compounds with broad substrate specificity. It is responsible for decreased drug accumulation in multidrug-resistant cells and often mediates the development of resistance to anticancer drugs. This protein also functions as a transporter in the blood–brain barrier.

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Overview

Product Name	Anti-P Glycoprotein/ABCB1 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-P Glycoprotein/ABCB1 Antibody Picoband® catalog # A00049-4. Tested in Flow Cytometry, IF, ICC, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	Flow Cytometry, IF, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Storage Instructions	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.
Host	Rabbit
Uniprot ID	P08183

Technical Details

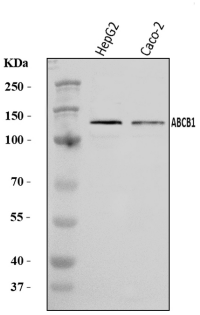
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human P Glycoprotein/ABCB1, which shares 78.9% amino acid (aa) sequence identity with mouse ABCB1.

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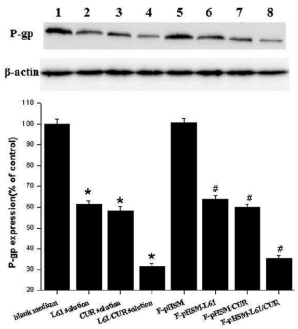
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5 ug/ml, Human Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human Flow Cytometry (Fixed), 1-3 ug/1x10^6 cells, Human Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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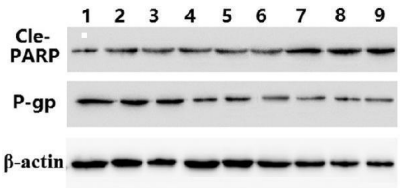
Anti-P Glycoprotein/ABCB1 Antibody Picoband® (A00049-4) Images



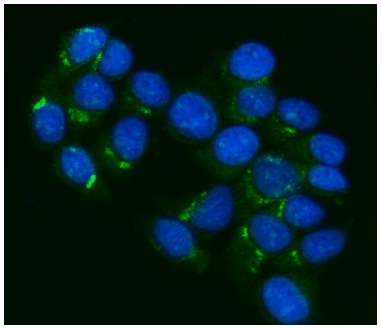
Western blot analysis of P Glycoprotein/ABCB1 using anti-P Glycoprotein/ABCB1 antibody (A00049-4). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human HepG2 whole cell lysates, Lane 2: human Caco-2 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-P Glycoprotein/ABCB1 antigen affinity purified polyclonal antibody (Catalog # A00049-4) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for P Glycoprotein/ABCB1 at approximately 141 kDa. The expected band size for P Glycoprotein/ABCB1 is at 141 kDa.



Effects of the various tested formulations on P-gp expression in MCF-7/ADR cells. (1) Control; (2) Pluronic L61 unimers; (3) Curcumin; (4) mixed Pluronic L61/CUR solution; (5) F-pHSM; (6) F-pHSM-L61/CUR; (7) F-pHSM-L61; (8) F-pHSM/CUR. * P < 0.05: significantly different from cells treated with the blank medium, # P < 0.05: significantly different from the F-pHSM-treated cells. The blots were cropped and the full-length blots were included in the . Index in PubMed under a CC BY license. PMID: 28195164



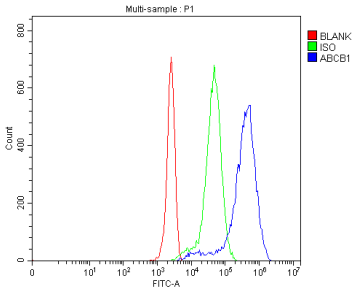
Expression of P-gp and Cle-PARP in tumour tissue form mice after treatment with different formulations: 1. Saline; 2. DOX solution; 3. F-pHSM; 4. F-pHSM/CUR; 5. F-pHSM-L61; 6. F-pHSM-L61/CUR; 7. F-pHSM/CUR/DOX; 8. F-pHSM-L61/DOX; 9. F-pHSM-L61/CUR/DOX. Index in PubMed under a CC BY license. PMID: 28195164



IF analysis of P Glycoprotein/ABCB1 using anti-P Glycoprotein/ABCB1 antibody (A00049-4). P Glycoprotein/ABCB1 was detected in an immunocytochemical section of MCF-7 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-P Glycoprotein/ABCB1 Antibody (A00049-4) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence

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microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of 293T cells using anti-P Glycoprotein/ABCB1 antibody (A00049-4). Overlay histogram showing 293T cells stained with A00049-4 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-P Glycoprotein/ABCB1 Antibody (A00049-4, 1 ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

2 Publications Citing This Product

1. PubMed ID: 10.1038/srep42465, pH-sensitive micelles for the intracellular co-delivery of curcumin and Pluronic L61 unimers for synergistic reversal effect of multidrug resistance

2. PubMed ID: 19771531, Gao S, Liu Q, Wang X, Lin B, Zhang S. Med Oncol. 2010 Sep;27(3):960-7. Doi: 10.1007/S12032-009-9317-6. Epub 2009 Sep 23. Effects Of Lewis Y Antigen On The Gene Expression Of Multiple Drug Resistance-Associated Proteins In Human Ovarian Cancer Rmg-...

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