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

Catalog Number: A00049-3

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, Mouse, Rat
Description	Boster Bio Anti-P Glycoprotein/ABCB1 Antibody Picoband® catalog # A00049-3. Tested in ELISA, Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Mouse, Rat. 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	ELISA, Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
Storage Instructions	Store 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 freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P08183

Technical Details

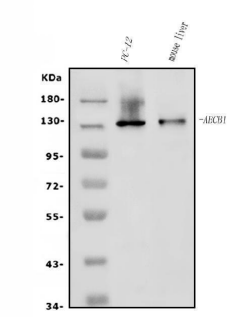
Immunogen	E.coli-derived human P Glycoprotein/ABCB1 recombinant protein (Position: R669-Y710).

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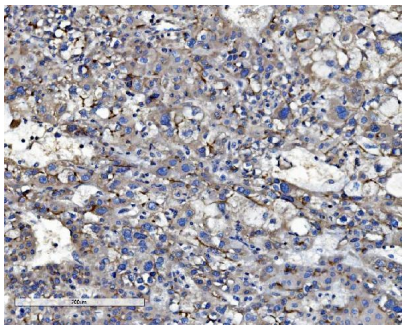
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5ug/ml, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human ELISA, 0.1-0.5ug/ml, - 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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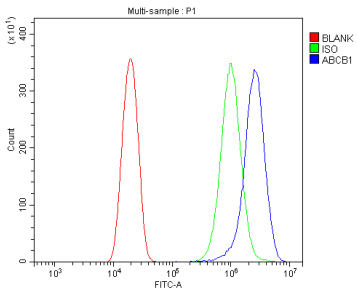
Anti-P Glycoprotein/ABCB1 Antibody Picoband® (A00049-3) Images



Western blot analysis of P Glycoprotein/ABCB1 using anti-P Glycoprotein/ABCB1 antibody (A00049-3). 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 30ug of sample under reducing conditions. Lane 1: rat PC-12 whole cell lysates, Lane 2: mouse liver tissue lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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 # A00049-3) 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 140KD. The expected band size for P Glycoprotein/ABCB1 is at 140KD.



IHC analysis of P Glycoprotein/ABCB1 using anti-P Glycoprotein/ABCB1 antibody (A00049-3). P Glycoprotein/ABCB1 was detected in paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-P Glycoprotein/ABCB1 Antibody (A00049-3) overnight at 4°C. 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 (SABC) (Catalog # SA1022) with DAB as the chromogen.



Flow Cytometry analysis of U20S cells using anti-P Glycoprotein/ABCB1 antibody (A00049-3). Overlay histogram showing U20S cells stained with A00049-3 (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 (A00049-3, 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

5 Publications Citing This Product

1. PubMed ID: 10.1211/jpp.61.06.0016, Glutathione depletion upregulates P-glycoprotein expression at the blood-brain barrier in rats

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2. PubMed ID: 10.1016/j.ijdevneu.2013.10.005, In vitro and in vivo study of dolichyl phosphate on the efflux activity of P-glycoprotein at the blood–brain barrier

3. PubMed ID: 10.1016/j.jns.2016.02.046, Regulation of P-glycoprotein efflux activity by Z-guggulsterone of Commiphora mukul at the blood-brain barrier

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Anti-P Glycoprotein/ABCB1 Antibody

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