

## Anti-P Glycoprotein/ABCB1 Antibody Picoband™

Catalog Number: A00049-1

### 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 for xenobiotic 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.

### Overview

Product Name	Anti-P Glycoprotein/ABCB1 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-P Glycoprotein/ABCB1 Antibody Picoband™ catalog # A00049-1. Tested in Flow Cytometry, IF, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IF, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.05mg NaN <sub>3</sub> .
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	A synthetic peptide corresponding to a sequence in the middle region of human P Glycoprotein, which shares 62.9% amino acid (aa) sequence identity with rat P Glycoprotein.
Predicted Reactive Species	Chicken
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	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Western blot, 0.1-0.5ug/ml</p> <p>Immunocytochemistry/Immunofluorescence, 2ug/ml</p> <p>Flow Cytometry, 1-3ug/1x10<sup>6</sup> cells</p>

## Anti-P Glycoprotein/ABCB1 Antibody Picoband™ (A00049-1) Images

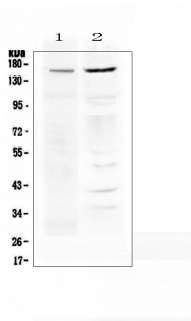


Figure 1. Western blot analysis of P Glycoprotein using anti-P Glycoprotein antibody (A00049-1).

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 50ug of sample under reducing conditions.

Lane 1: human THP-1 whole cell lysates,  
Lane 2: human A375 whole cell 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 antigen affinity purified polyclonal antibody (Catalog # A00049-1) 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 1:10000 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 at approximately 160KD. The expected band size for P Glycoprotein is at 141KD.

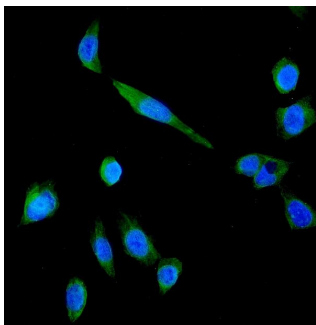


Figure 2. IF analysis of P Glycoprotein using anti-P Glycoprotein antibody (A00049-1).

P Glycoprotein was detected in immunocytochemical section of U2OS 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 2ug/mL rabbit anti-P Glycoprotein Antibody (A00049-1) 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 microscope and filter sets appropriate for the label used.

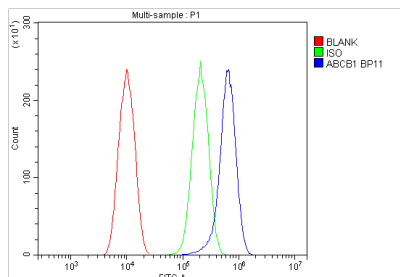


Figure 3. Flow Cytometry analysis of U2OS cells using anti-P Glycoprotein antibody (A00049-1).

Overlay histogram showing U2OS cells stained with A00049-1 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-P Glycoprotein Antibody (A00049-1, 1ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

1. PubMed ID: 10.7150/thno.13907, P-glycoprotein Mediates Postoperative Peritoneal Adhesion Formation by Enhancing Phosphorylation of the Chloride Channel-3

2. PubMed ID: 10.1016/j.jep.2013.10.028, The mechanism of the opening of the blood–brain barrier by borneol: A pharmacodynamics and pharmacokinetics combination study

3. PubMed ID: 10.1007/s00432-010-0828-5, Expression and significance of hypoxia-inducible factor-1 alpha and MDR1/P-glycoprotein in human colon carcinoma tissue and cells

Visit [bosterbio.com/anti-p-glycoprotein-antibody-a00049-1-boster.html](http://bosterbio.com/anti-p-glycoprotein-antibody-a00049-1-boster.html) to see all 6 publications.

## Submit a product review to Biocompare.com

Submit a review of this product to Biocompare.com to receive a \$20 Amazon.com giftcard! Your reviews help your fellow scientists make the right decisions. Thank you for your contribution.



Anti-P Glycoprotein/ABCB1 Antibody <sup>™</sup>