Anti-P Glycoprotein Antibody

HA500502

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, FC
Molecular Wt:	Predicted band size: 141 kDa.

Description: The membrane-associated protein encoded by this gene is a member of the superfamily of ATP-binding cassette (ABC) transporters. ABC proteins transport various molecules across extra- and intra-cellular membranes. ABC genes are divided into seven distinct subfamilies (ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, White). This protein is a member of the MDR/TAP subfamily. Members of the MDR/TAP subfamily are involved in multidrug resistance. The protein encoded by this gene 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. Mutations in this gene are associated with colchicine resistance and Inflammatory bowel disease 13. Alternative splicing and the use of alternative promoters results in multiple transcript variants.

Immunogen: Synthetic peptide within human P Glycoprotein aa 1,151-1,200.

Positive control: Mouse brain tissue lysate, rat brain tissue lysate, human brain tissue lysate, rat brain tissue, SH-SY5Y.

Subcellular location: Cell membrane, Apical cell membrane.

Database links: SwissProt: P08183 Human | P06795 Mouse | P43245 Rat

Recommended Dilutions:

WB	1:2,000-1:5,000
IHC-P	1:1,000
FC	1:50-1:200

Storage Buffer: 1*TBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Immunogen affinity purified.

Images

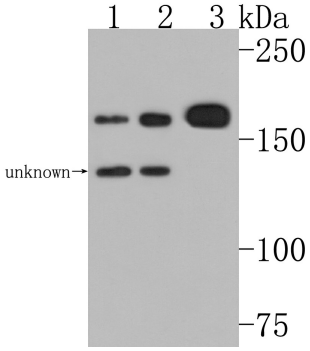

Fig1: Western blot analysis of P Glycoprotein on different lysates. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody (HA500502, 1/2,000) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:200,000 dilution was used for 1 hour at room temperature.
Positive control:
Lane 1: Mouse brain tissue lysate
Lane 2: Rat brain tissue lysate
Lane 3: Human brain tissue lysate

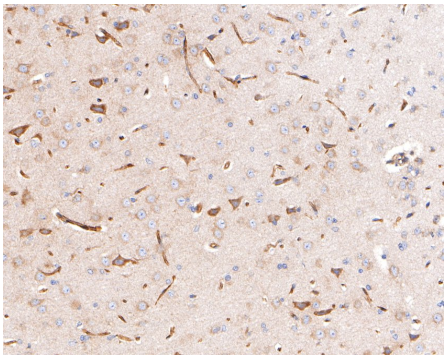

Fig2: Immunohistochemical analysis of paraffin-embedded rat brain tissue using anti-P Glycoprotein antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes.The tissues were blocked in 1% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA500502, 1/1,000) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

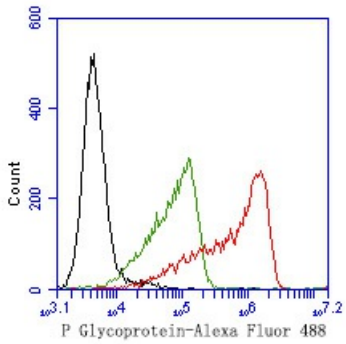

Fig3: Flow cytometric analysis of P Glycoprotein was done on SH-SY5Y cells. The cells were fixed, permeabilized and stained with the primary antibody (HA500502, 1ug/ml) (red) compared with Rabbit IgG, monoclonal - Isotype Control (green). After incubation of the primary antibody at room temperature for an hour, the cells were stained with a Alexa Fluor®488 conjugate-Goat anti-Rabbit IgG Secondary antibody at 1/1000 dilution for 30 minutes.Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Mollazadeh S. et. al. Structural and functional aspects of P-glycoprotein and its inhibitors. Life Sci. 2018 Dec
2. Waghray D. et. al. Inhibit or Evade Multidrug Resistance P-Glycoprotein in Cancer Treatment. J Med Chem. 2018 Jun