Anti-P Glycoprotein Antibody [A10F2-R]

HA601314

Product Type:	Recombinant Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	IHC-P
Molecular Wt:	Predicted band size: 142 kDa
Clone number:	A10F2-R

Description: P-glycoprotein 1 (permeability glycoprotein, abbreviated as P-gp or Pgp) also known as multidrug resistance protein 1 (MDR1) or ATP-binding cassette sub-family B member 1 (ABCB1) or cluster of differentiation 243 (CD243) is an important protein of the cell membrane that pumps many foreign substances out of cells. More formally, it is an ATP-dependent efflux pump with broad substrate specificity. It exists in animals, fungi, and bacteria, and it likely evolved as a defense mechanism against harmful substances. Substrate enters P-gp either from an opening within the inner leaflet of the membrane or from an opening at the cytoplasmic side of the protein. ATP binds at the cytoplasmic side of the protein. Following binding of each, ATP hydrolysis shifts the substrate into a position to be excreted from the cell. Release of the phosphate (from the original ATP molecule) occurs concurrently with substrate excretion. ADP is released, and a new molecule of ATP binds to the secondary ATP-binding site. Hydrolysis and release of ADP and a phosphate molecule resets the protein, so that the process can start again.

Immunogen: Recombinant protein within human P Glycoprotein aa 935-1,280 / 1,280.

Positive control: Human colon cancer tissue, human liver cancer tissue, human kidney tissue, mouse kidney tissue, rat kidney tissue.

Subcellular location: Cell membrane, Apical cell membrane, Cytoplasm.

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

Recommended Dilutions:

IHC-P	1:5,000

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

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

Purity: Protein A affinity purified.

Images

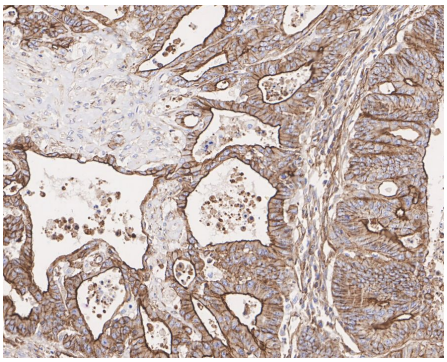

Fig1: Immunohistochemical analysis of paraffin-embedded human colon cancer tissue with Mouse anti-P Glycoprotein antibody (HA601314) at 1/5,000 dilution.

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 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601314) at 1/5,000 dilution for 1 hour 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.

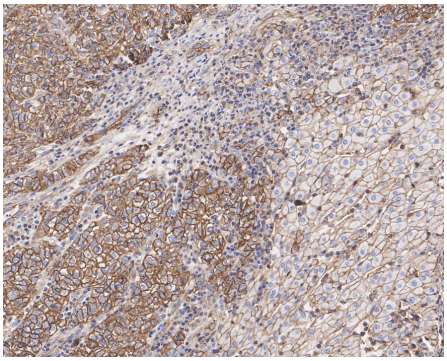

Fig2: Immunohistochemical analysis of paraffin-embedded human liver cancer tissue with Mouse anti-P Glycoprotein antibody (HA601314) at 1/5,000 dilution.

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 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601314) at 1/5,000 dilution for 1 hour 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.

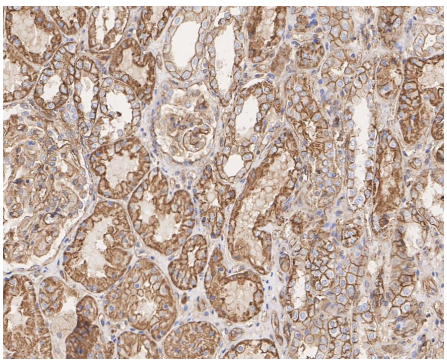

Fig3: Immunohistochemical analysis of paraffin-embedded human kidney tissue with Mouse anti-P Glycoprotein antibody (HA601314) at 1/5,000 dilution.

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 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601314) at 1/5,000 dilution for 1 hour 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.

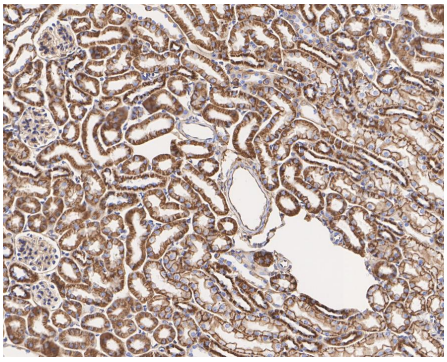

Fig4: Immunohistochemical analysis of paraffin-embedded mouse kidney tissue with Mouse anti-P Glycoprotein antibody (HA601314) at 1/5,000 dilution.

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 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601314) at 1/5,000 dilution for 1 hour 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.

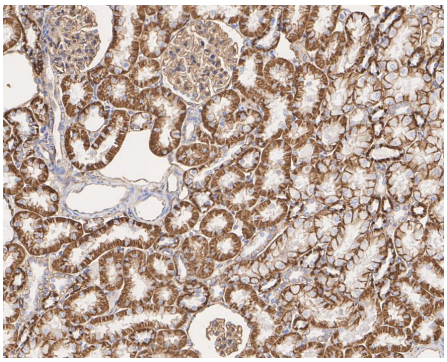

Fig5: Immunohistochemical analysis of paraffin-embedded rat kidney tissue with Mouse anti-P Glycoprotein antibody (HA601314) at 1/5,000 dilution.

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 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601314) at 1/5,000 dilution for 1 hour 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.

Background References

1. Chai AB et al. Regulation of P-Glycoprotein in the Brain. Int J Mol Sci. 2022 Nov
2. Silva V et al. Xanthones as P-glycoprotein modulators and their impact on drug bioavailability. Expert Opin Drug Metab Toxicol. 2021 Apr