

Anti-PMCA1 Rabbit Monoclonal Antibody

Catalog # ABO15633

Product Information

Application	WB, IHC
Primary Accession	P20020
Host	Rabbit
Isotype	IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-PMCA1 Rabbit Monoclonal Antibody . Tested in WB, IHC applications. This antibody reacts with Human, Mouse, Rat.

Additional Information

Gene ID	490
Other Names	Plasma membrane calcium-transporting ATPase 1, 7.2.2.10, Plasma membrane calcium ATPase isoform 1, PMCA1, Plasma membrane calcium pump isoform 1, ATP2B1 (HGNC:814)
Calculated MW	134685
Application Details	WB 1:500-1:2000 IHC 1:50-1:200
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names Immunogen	Clone: 22A09 A synthesized peptide derived from human PMCA1
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

Name	ATP2B1 (HGNC:814)
Function	Catalyzes the hydrolysis of ATP coupled with the transport of calcium from the cytoplasm to the extracellular space thereby maintaining intracellular calcium homeostasis (PubMed: 35358416). Plays a role in blood pressure

regulation through regulation of intracellular calcium concentration and nitric oxide production leading to regulation of vascular smooth muscle cells vasoconstriction. Positively regulates bone mineralization through absorption of calcium from the intestine. Plays dual roles in osteoclast differentiation and survival by regulating RANKL-induced calcium oscillations in preosteoclasts and mediating calcium extrusion in mature osteoclasts (By similarity). Regulates insulin sensitivity through calcium/calmodulin signaling pathway by regulating AKT1 activation and NOS3 activation in endothelial cells (PubMed:[29104511](#)). May play a role in synaptic transmission by modulating calcium and proton dynamics at the synaptic vesicles.

Cellular Location

Cell membrane; Multi-pass membrane protein. Basolateral cell membrane {ECO:0000250|UniProtKB:G5E829}. Synapse {ECO:0000250|UniProtKB:G5E829} Presynaptic cell membrane {ECO:0000250|UniProtKB:G5E829}; Multi-pass membrane protein. Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane {ECO:0000250|UniProtKB:G5E829}; Multi-pass membrane protein. Note=Colocalizes with SV2A in photoreceptor synaptic terminals. Colocalizes with NPTN to the immunological synapse. Colocalizes with EPB41 to the basolateral membrane in enterocyte. Preferentially sorted to recycling synaptic vesicles. {ECO:0000250|UniProtKB:G5E829}

Tissue Location

Isoform B: Ubiquitously expressed. Isoform C: Found in brain cortex, skeletal muscle and heart muscle. Isoform D: Has only been found in fetal skeletal muscle. Isoform K: Found in small intestine and liver. Abundantly expressed in the endometrial epithelial cells and glandular epithelial cells in early-proliferative phase and early-secretory phases (PubMed:21400627)

Images

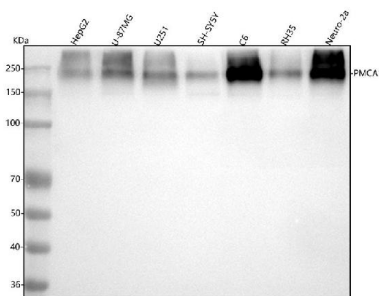


Figure 1. Western blot analysis of PMCA1 using anti-PMCA1 antibody (M02669).

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 U-87MG whole cell lysates,
Lane 3: human U251 whole cell lysates,
Lane 4: human SH-SY5Y whole cell lysates,
Lane 5: rat C6 whole cell lysates,
Lane 6: rat RH35 whole cell lysates,
Lane 7: mouse Neuro-2a 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-PMCA1 antigen affinity purified monoclonal antibody (Catalog # M02669) at 1:500 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 1:500 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 PMCA1 at approximately 250 kDa. The expected band size for PMCA1 is at 135 kDa.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.