

PMCA2 (S-18): sc-22073

BACKGROUND

Plasma membrane-type Ca^{2+} -ATPases (PMCA) mediate the export of bivalent calcium ions from eukaryotic cells. As members of the P class of ion-motive ATPases, PMCA are a functionally diverse group of proteins that are derived from alternatively spliced transcripts originating from four distinct genes, PMCA1, 2, 3 and 4. The expression of different PMCA isoforms and splice variants is regulated in a developmental, tissue- and cell type-specific manner, and with respect to the physiological needs of specific cell and tissue types. Spatial and temporal rates of resting intracellular Ca^{2+} concentrations and Ca^{2+} signaling in eukaryotic cells are dependent on the array of PMCA isoforms that are expressed in concert with the rate of Ca^{2+} export. The human PMCA2 gene is located on chromosome 3 and antibodies directed against PMCA2 detect three proteins in brain and heart. Homozygous null mutations in the mouse gene result in deafwaddler mice, which are characterized by having a hesitant, wobbly gait, displaying head bobbing and are deaf.

CHROMOSOMAL LOCATION

Genetic locus: ATP2B2 (human) mapping to 3p25.3; Atp2b2 (mouse) mapping to 6 E3.

SOURCE

PMCA2 (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PMCA2 of human origin.

PRODUCT

Each vial contains 200 μg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-22073 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

PMCA2 (S-18) is recommended for detection of PMCA2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PMCA2 (S-18) is also recommended for detection of PMCA2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PMCA2 siRNA (h): sc-42598, PMCA2 siRNA (m): sc-42599, PMCA2 shRNA Plasmid (h): sc-42598-SH, PMCA2 shRNA Plasmid (m): sc-42599-SH, PMCA2 shRNA (h) Lentiviral Particles: sc-42598-V and PMCA2 shRNA (m) Lentiviral Particles: sc-42599-V.

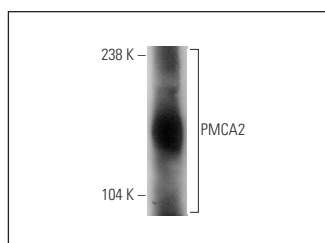
Molecular Weight of PMCA2: 127-137 kDa.

Positive Controls: rat plasma.

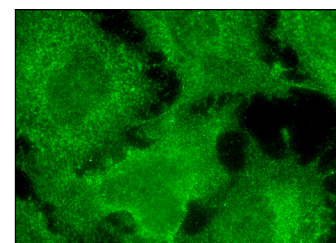
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PMCA2 (S-18): sc-22073. Western blot analysis of PMCA2 in rat plasma.



PMCA2 (S-18): sc-22073. Immunofluorescence staining of formalin-fixed Hep G2 cells showing membrane localization.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **PMCA (F-3): sc-271917** or **PMCA2/3 (C-3): sc-398013**, our highly recommended monoclonal alternatives to PMCA2 (S-18).