

Product datasheet for **TA328787**

Atp2b2 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	WB: 1:200-1:2000
Reactivity:	Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)KEIPDPSSINAKTLE, corresponding to amino acid residues 522-536 of rat PMCA2. 2nd intracellular loop.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN ₃ .
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	ATPase plasma membrane Ca ²⁺ transporting 2
Database Link:	NP_036640 Entrez Gene 11941 Mouse Entrez Gene 24215 Rat P11506

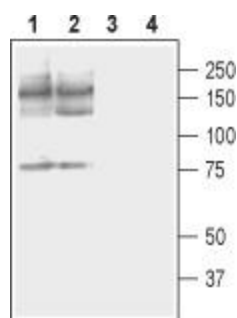
[View online »](#)

Background:

The plasma membrane Ca^{2+} ATPase (PMCA) is a transport protein in the plasma membrane of cells responsible for removing calcium (Ca^{2+}) from the cell. This pump is vital for regulating the amount of Ca^{2+} within cells. The PMCA and the Na^{+} calcium exchanger (NCX) are together the main regulators of intracellular Ca^{2+} concentrations. Since it transports Ca^{2+} into the extracellular space, the PMCA is also an important regulator of the Ca^{2+} concentration in the extracellular space. The PMCA belongs to a family of P-type primary ion transport ATPases, and is expressed in a variety of tissues, including the brain. The pump is powered by the hydrolysis of adenosine triphosphate (ATP), with a stoichiometry of one Ca^{2+} ion removed for each molecule of ATP hydrolyzed. It binds to Ca^{2+} ions with a high affinity (a K_m of 100 to 200 nM) but does not remove Ca^{2+} at a very fast rate. This is in contrast to the NCX, which has a low affinity and a high capacity. Thus, the PMCA is effective at binding Ca^{2+} even when its concentration within the cell is very low, so it is suited for maintaining Ca^{2+} at its normally very low levels. The NCX is better suited for removing large amounts of Ca^{2+} quickly, as it is needed in neurons after an action potential. Thus the activities of the two types of pump complement each other.

Synonyms:

OTTHUMP00000158863; OTTHUMP00000178537; PMCA2; PMCA2a; PMCA2i

Product images:


Western blot analysis of rat (lanes 1 and 3) and mouse (lanes 2 and 4) brain membranes: 1, 2. Anti-PMCA2 antibody, (1:400). 3, 4. Anti-PMCA2 antibody, preincubated with the control peptide antigen.