

Anti- Sodium Calcium Exchanger 1 (NaCX-1)

CATALOG NO.: XPS-2028

CLONE: 6H2

SUBCLASS: IgG_{2B}

FORM: Affinity Purified

BACKGROUND:

Ca²⁺ plays a critical role in intracellular signaling and thus regulation of calcium balance is critical for the maintenance of this signaling function. The plasma membrane Na⁺/Ca²⁺ (NaCX) exchangers mediate Na⁺-dependent Ca²⁺ efflux in a wide variety of cell types. NaCX can move Ca²⁺ either into or out of cells, depending on the net Na⁺, Ca²⁺, and K⁺ gradient across the membrane. In mammals, at least 5 distinct genes code for the exchangers: Three NaCX (NaCX1, NaCX2, and NaCX3), and two in the NaCKX family (NaCKX1 and NaCKX2). NaCX-1 is most prominently expressed in the heart where it plays a major role in excitation-contraction coupling.

SOURCE:

Mouse anti-NaCX-1 monoclonal antibody was raised against a fusion protein from N-terminus of rabbit renal Na/Ca exchanger. Mouse anti-NaCX-1 was prepared from Protein G affinity purification.

APPLICATION:

This monoclonal antibody can be used for strong and specific immunolabeling of the Na/Ca exchanger NaCX-1 (Mr ~120k and 160k) with a broad tissue and species reactivity. Applications include Dot Blots (DB) and Western Blots (WB). When internally tested under ideal conditions the working dilutions were 1:1000 for DB and WB.

Anti-NaCX-1

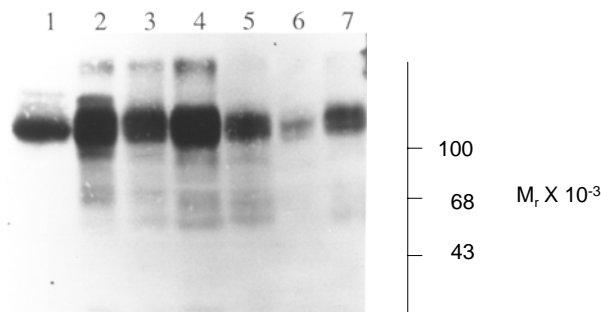


Figure: Western blot of various tissues showing immunolabeling of the ~120k NaCX-1 protein. Lane 1 - Brain; Lane 2 - Heart; Lane 3 - Kidney; Lane 4 - Lung; Lane 5 - Spleen; Lane 6 - Liver; Lane 7 - Skeletal muscle. **This product is for research use only.**



STORAGE:

It is supplied as affinity purified monoclonal antibody, 100 µg lyophilized antibody. There is adequate amount of material to conduct 10-mini Western Blots. The antibody should be reconstituted in 100 µl phosphate buffered saline (PBS: 137 mM NaCl, 7.5 mM Na₂HPO₄, 2.7 mM KCl, 1.5 mM KH₂PO₄, pH 7.4) before use. For long term storage -80°C is recommended, but shorter term storage at -20°C is also acceptable as aliquots may be taken without freeze/thawing due to the presence of 50% glycerol. Stock solutions are stable for a minimum of 1 year at -20°C.

REFERENCES:

1. White, K.E., Gesek, F.A., Reilly, R.F., Friedman, P.A. "NaCX1 Na/Ca exchanger inhibition by antisense oligonucleotides in mouse distal convoluted tubule cells," *Kidney Int.* **54** (1998) 897 - 906.
2. Matsuoka, S., Nicoll, D.A., Reilly, R.F., Hilgemann, D.W., Philipson, K.D., "Initial localization of regulatory regions of the cardiac sarcolemmal Na⁺-Ca²⁺ exchanger." *Proc Natl. Acad. Sci., U.S.A.*, **90**, (1993) 3870 - 3874.