ProductInformation

ANTI-Na^+/Ca^{2+}-K^+ EXCHANGER 2
Developed in Rabbit
Affinity Isolated Antibody

Product Number **S 1939**

Product Description

Anti-Na^+/Ca^{2+}-K^+ Exchanger 2 (NCKX2) is developed in rabbit using a highly-purified synthetic peptide corresponding to amino acids 90-102 (DLNDKIRDYTP-QP) of rat NCKX2, with an additional C-terminal cysteine, conjugated to KLH as the immunogen. This sequence is predicted to be on the extracellular side of the plasma membrane. The antibody is affinity isolated on immobilized immunogen.

Anti-Na^+/Ca^{2+}-K^+ Exchanger 2 recognizes overexpressed recombinant rat brain NCKX2 (78 kDa) by immunoblotting and immunofluorescence.

Na^+/Ca^{2+}-K^+ exchanger (NCKX) isoforms are expressed in retinal photoreceptors (NCKX1)[1,2] and in brain (NCKX2).[3] Unlike the abundant and widely expressed Na^+/Ca^{2+} exchanger, which modulates intracellular Ca^{2+} levels by catalyzing the exchange of three Na^+ ions for one Ca^{2+} ion, NCKX isoforms exchange four Na^+ ions for one Ca^{2+} and one K^+ ion. The NCKX uses the transmembrane Na^+ gradient to catalyze countertransport of Ca^{2+} in a K^+-dependent mechanism against its electrochemical gradient. NCKX2 may play a significant role in calcium homeostasis and the regulation of neuronal function.

Reagent

Anti-Na^+/Ca^{2+}-K^+ Exchanger 2 is supplied as affinity isolated antibody in phosphate buffered saline containing 1.0 mg/ml bovine serum albumin and 0.05 % sodium azide as preservative.

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling.

Storage/Stability

Store at –20 °C. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in “frost-free” freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

The recommended working dilution is 1:100 for immunoblotting and immunofluorescence. In immunofluorescence experiments, staining of the plasma membrane of rat NCKX2-transfected human embryonic kidney (HEK) cells is consistent with the predicted subcellular localization.

Note: In order to obtain best results and assay sensitivities of different techniques and preparations, we recommend determining optimal working dilutions by titration test.

References

1. Haug-Collet, K. et al., J. Cell Biol., **147**, 659-670 (1999).
2. Prinsen, C.F. et al., J. Neurosci., **20**, 1424-1434 (2000).
3. Dong, H. et al., J. Biol. Chem., **276**, 25919-25928 (2001).

mje 11/01