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ProductInformation

ANTI-AMILORIDE SENSITVE CHANNEL ASIC2
Developed in Rabbit, Affinity Isolated Antibody

Product Number **A 8310**

Product Description

Anti-Amiloride Sensitive Channel ASIC2 is developed in rabbit using a highly purified peptide DLKESPSEGSLQ-PSSIQC ($ASIC2_{2-18}$), corresponding to residues 2-18 of rat or human ASIC2[1-3] with additional N-terminal cysteine as an immunogen. The antibody was affinity isolated on immobilized $ASIC2_{2-18}$.

Anti-Amiloride Sensitive Channel ASIC2 recognizes ASIC2 protein from rat brain by immunoblotting.

The degenerin/epithelial Na^+ channel superfamily includes the epithelial Na^+ channels (ENac), the degenerins in *C. elegans*, and different ligand-gated cation channels, such as the Phe-Met-Arg-Phe-NH_2-activated channel from *Helix aspersa* (FaNaC), H^+-gated channels (ASICs), and P2X receptors. All of them share common topology: intracellular N- and C-termini, two transmembrane-spanning domains, and the large extracellular domain.[4-6]

In *C. elegans*, the mutations in degenerin genes deg-1, mec-4, and mec-10 lead to neurodegeneration.[6-8] ASIC2 (also called BNC1, BNaC1, or MDEG1) was first cloned as the mammalian analog of the degenerins.[1-3] When ASIC2 is expressed in *Xenopus* oocytes or in mammalian cells, the wild-type ASIC2 lacks channel activity at physiological pH. Its mutations, however, which are similar to those inducing neurodegeneration in *C. elegans*, transform it into a constitutively activated amiloride-sensitive cation channel, leading to swelling and death of the cells expressing ASIC2.[1]

Later, ASIC2 was found to be activated by extracellular acidification.[9] Thus, it belongs to the newly identified family of H^+-gated channels. In addition to ASIC2, this family is composed of ASIC1 (BNaC2), ASIC3 (DRASIC), and ASIC2b (MDEG2).[10] ASIC2b, a splice variant of ASIC2, is not active by itself, but it can associate with ASIC2 or with DRASIC and modulate their kinetics and pH sensitivity.[9] ASIC2 can associate with ASIC1 and form a heteromultimer with new properties.[11]

Reagents

Anti-Amiloride Sensitive Channel ASIC2 is supplied lyophilized at 0.3 mg/ml from phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin, 5% sucrose, and 0.025% sodium azide.

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 practices.

Preparation Instructions

Reconstitute the lyophilized vial with 0.05 ml or 0.2 ml deionized water, depending on the package size purchased. Antibody dilutions should be made in buffer containing 1-3% bovine serum albumin.

Storage/Stability

Prior to reconstitution, store at –20°C. After reconstitution, the stock antibody solution may be stored at 4°C for up to 2 weeks. 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 1:200 (1.5 µg/ml) for immunoblotting using HRP-goat anti-rabbit and detection by ECL.

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

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