



Product Information

ANTI- β EPITHELIAL CELL SODIUM CHANNEL

Developed in Rabbit, Affinity Isolated Antibody

Product Number **E 4777**

Product Description

Anti- β Epithelial Cell Sodium Channel (β -ENaC) is developed in rabbit using a highly-purified synthetic peptide corresponding to amino acids 619-640 (NYDSLRLQPLDVIESDSEGDAI) of the human β -ENaC protein, with an additional N-terminal cysteine, conjugated to KLH as the immunogen. This sequence is 90% conserved in rat and rabbit and 81% conserved in mouse. The antibody is affinity isolated on immobilized immunogen.

Anti- β Epithelial Cell Sodium Channel specifically recognizes the unglycosylated form (75 kDa) of *in vitro* synthesized radiolabeled rat β -ENaC protein by immunoprecipitation. This antibody is not recommended for use in immunoblotting.

Epithelial cell sodium channels (ENaCs) are amiloride-sensitive members of the degenerin/epithelial sodium channel (Deg/ENaC) superfamily of ion channels.¹ Members of this superfamily share organizational similarity in that they all possess short intracellular amino and carboxyl termini, two short membrane-spanning segments and a large extracellular loop with a conserved cysteine-rich region.² There are three homologous isoforms of ENaC (α , β , γ). ENaC in the kidney, lung and colon plays an essential role in trans-epithelial Na^+ and fluid balance. ENaC also mediates aldosterone-dependent sodium re-uptake in the distal nephron of the kidney, thus regulating blood pressure. ENaC is thought to be regulated, in part, through association with the cystic fibrosis transmembrane conductance regulator (CFTR) chloride ion channel. Gain-of-function mutations in β - or γ -ENaC can cause severe arterial hypertension (Liddel's syndrome) and loss-of-function mutations in α - and β -ENaC can cause pseudohypoaldosteronism.

Reagent

Anti- β Epithelial Cell Sodium Channel is supplied as 100 μg of affinity isolated rabbit antibody in phosphate buffered saline containing 1.0 mg/ml bovine serum albumin and 0.05 % 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.

Storage/Stability

Store the antibody at $-20\text{ }^{\circ}\text{C}$. 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 working dilution for immunoprecipitation is assay dependent.

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. Mano, I., and Driscoll, M., *Bioessays*, **21**, 568-578 (1999).
2. Benos, D.J., and Stanton, B.A., *J. Physiol. (London)*, **520**, 631-644 (1999).

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