

Product Specification Sheet

Epithelial Na-Channel δ (ENAC δ) Antibodies

Cat. # ENACd41-P	Human ENAC δ Control/blocking Peptide #1	SIZE: 100 ug
Cat. # ENACd41-S	Rabbit Anti-Human ENAC δ antiserum # 1	SIZE: 100 ul
Cat. # ENACd41-A	Rabbit Anti-Human ENAC δ IgG #1 (aff pure)	SIZE: 100 ug

Tissue acidosis (decrease in pH below the physiological level) that occurs in ischemia, tissue damage or inflammation is accompanied by pain. At the molecular level, H⁺-gated cation channels are activated by low pH in nociceptive neurons. H⁺-gated cation channels, members of the **NaC/DEG superfamily of Na channels** that include **amiloride-sensitive epithelial Na⁺ channel proteins (α , β , and γ , and δ -ENAC subunits)**, are expressed in epithelia of the vertebrate kidney, colon, lung, tongue, and brain. The **ENAC** subunits may form heterotrimeric active Na channel. ENACs are involved in Na and water reabsorption, and salty taste transduction) of vertebrate colon, lung, kidney and tongue. The superfamily of DEG/NaC proteins are characterized by intracellular N and C-termini, two TM domains, and a large extracellular loop.

ENAC- β subunit (mouse/rat 638 aa, human 640 aa), **ENAC- γ** subunit (mouse 655 aa, rat 650 aa, and human 649 aa) are expressed in lung, kidney, colon and other tissues. ENAC- β from various species are ~80% identical, and only ~30% similarity with the ENAC- α . **ENAC- δ** (human 638 aa) is expressed mainly in brain, pancreas, testis, and ovary. It is 27-30% homologous with the other ENACs. It can associate with β , and γ ENAC to form a functional channel.

Source of Antigen and Antibodies

Antigen	19aa peptide of human ENAC δ Designated (ENACd41-P or control peptide); epitope location ~ N-terminus, Extracellular domain
Ab Host/type	Rabbit, polyclonal Unpurified antiserum (cat #ENACd41-S) Aff pure IgG1 (cat #ENACd41-A) purified over antigen-agarose column
2-ab	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)
100ul solution lyophilized powder
Supplied 0.05% azide, Reconstitute powder in 100 ul PBS

Affinity pure IgG
100 ug/100ul solution lyophilized powder
Supplied in Buffer: PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at -20°C and powder at 4°C or -20°C..

Long-term: at -20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20°C or below.

Shipping: 4°C for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure antibody using ECL technique).

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested. We recommend the use of affinity purified antibody at 2-20 ug/ml in paraformaldehyde fixed sections of tissues.

Specificity & Cross-reactivity

The human ENACd41-P control peptide sequence homology in various species is not yet known. No significant homology is detected with ENAC α , β , γ subunits. Antibody cross-reactivity in various species has not been studied. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at the web site).

General References: (1) Waldmann R et al (1995) J. Biol. Chem. 270, 27411-27414; Garty H and Palmer LG (1997) Physiol. Reviews. 77, 359-396 (review).

*This product is for In vitro research use only.

Related material available from ADI

Chloride channel, ASIC, ENACs, K-Channels, Taste receptors, CNG-channels antibodies

Western blot recycle kit - Strip antibodies and re-use the same blot to probe with different ENACs

Brain Protein Explorer-Study distribution of proteins in 12-distinct regions rat/mouse brain with pre-made protein blots.

ENACd41-S-A-P 71217A

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