

Acid Sensing Ion Channels 1 (ASIC4) Antibodies

Cat. # ASIC41-P	Rat ASIC4 Control Peptide	SIZE: 100 ug
Cat. # ASIC41-S	Rabbit Anti-Rat ASIC4 antiserum	SIZE: 100 ul
Cat. # ASIC41-A	Rabbit Anti-Rat ASIC4 IgG (affinity pure)	SIZE: 100 ug

Tissue acidosis that occurs in ischemia, tissue damage or inflammation is accompanied by pain. Proton-gated cation channels are activated by low pH in nociceptive neurons. H⁺-gated channels are members of the **NaC/DEG superfamily** that include: (1) Amiloride-sensitive epithelial Na⁺ channels (α , β , and γ , and δ -ENaC subunits); (2) A FMRFamide-gated channel (**FaNaC**), (3) and mechanosensory channel proteins of nematode **degenerins (DEG)**. NaC/DEG superfamily is characterized by intracellular N and C-termini, two transmembrane domains, and a large extracellular loop. All members of this family are selective for Na⁺ and blocked by amiloride.

The mammalian homolog of **degenerins (MDEG or MDEG1; now designated ASICs for Acid Sensing Ion Channels)**. Three are at least 4 distinct proteins in ASIC family ASIC1-4. **ASIC4/BNAC4/SPASIC** (Rat 539/666 aa, chromosome 2; rat 539 aa, ~97% homology between rat and Rat) is strongly expressed in pituitary and also detected in most areas of brain. ASIC4 is the most divergent member of ASIC family showing only 45% identity with ASIC1-3. ASIC is not activated by low pH, and my associate with other ASICs to form a functional channel.

Source of Antigen and Antibodies

Antigen	19aa peptide of Rat/human/mouse ASIC-4 ; Designated (ASIC41-P or control peptide). Epitope location ~ N terminal, Extracellular
Ab Host/type	Rabbit, polyclonal, Unpurified antiserum (cat # ASIC41-S) Aff pure IgG1 (cat #ASIC41-A) purified over antigen-agarose column
2-ab	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control	# 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 in Buffer: 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 vials for less than a week at 4oC.

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

Stability: 6-12 months at -20oC or below.

Shipping: 4oC 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). See refs 2.

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: see refs 2.

Specificity & Cross-reactivity

Rat ASIC41-P control peptide is 100% conserved in rat, mouse ASIC4. No significant sequence homology is detected with other ASIC-beta or other ASICs. 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:web site).

General References: Akopian AN et al (2000) Neuroprot. 14, 2217-2222; Grunder S et al (2000) Neuroprot. 14, 1607-1611

*This product is for In vitro research use only.

Related material available from ADI

Antibodies ASIC1-3; EnaCs (α , β , γ , and δ) KCNQ1-4; CNG1-4, Taste receptors 1/2, Vanniloid receptors (VR1 and VRL1)

Pre-made Brain Blot (study distribution of proteins in 12-distinct regions of rat/mouse brain)

Recycle immuno blot in Just 5-10 min. (use the same blot for various ASIC). (no boiling or pungent mercaptoethanol).

ASIC41-S-A-P 71208S

India Contact:

Life Technologies (India) Pvt. Ltd.

306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444
Email: customerservice@lifetechindia.com Website: www.lifetechindia.com