

Product Specification Sheet

Acid Sensing Ion Channels 1 (ASIC1-3) Antibodies

Cat. # **ASIC-PAN51-P** Mixture of Rat ASIC11-P, ASICB12-P, MDEG11-P, MDEG21-P, DRASIC31-P Control Peptides

Cat. # **ASIC-PAN51-S** Mixture of Rat ASIC11-S, ASICB12-S, MDEG11-S, MDEG21-S, DRASIC31-S antiserum

Cat. # **ASIC-PAN51-A** Mixture of Rat ASIC11-A, ASICB12-A, MDEG11-A, MDEG21-A, DRASIC31-A IgG (Aff pure)

The mammalian homolog of degenerins (**MDEG** or **MDEG1**; now designated ASIC for Acid Sensing Ion Channels). Three are at least three distinct proteins in ASIC family: **ASIC1** (identical with human BNAC2 or BNC2), expressed in brain and dorsal root ganglions (DRG) cells, is activated by pH <7.0. A splice variant of rat ASIC, **ASIC-β**, is expressed only in a subset of small and large diameter sensory neurons and absent in sympathetic neurons and CNS. **MDEG1/ASIC2**, 67% identity with ASIC1, requires more acidic pH than ASIC1 and has slower activation kinetic. **MDEG2/ASIC2b**, a splice variant of MDEG1, is expressed in both brain and sensory neurons. MDEG2 is activated neither by mutations nor low pH. However, it acts as modulatory subunit when associated with MDEG1 and another H⁺-activated channel, **DRASIC/ASIC3** (Dorsal Root ganglion ASIC). DRASIC is specific for sensory neurons. In response to a drop in pH, DRASIC gives rise to a biphasic currents with poor discrimination between Na⁺ and K⁺. This sustained current may be important in pain sensation.

Source of Antigen and Antibodies

Antigen	Specific antigenic peptides in the package of cat # ASIC-Pan-51-P ; control peptide) were selected from rat ASIC11-P etc proteins (5 peptides; see individual data sheets) and injected into separate set of rabbits to produce antisera
Ab Host/type	Rabbit, polyclonal.. Antisera (ASIC11S) etc has been individually tested and then mixed in equal proportions. Antibody has been affinity purified (ASIC11-A etc) using control peptide and provided as a mixture of 5 independent antibodies.
2-ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Control/blocking peptides cat # ASIC-PAN-51-P (mixed 20 ug each of the following; total 100 ug)

Cat # ASIC11-P; #ASICB12-P, #MDEG11-P MDEG21-P, DRASIC31-P

Rabbit Antiserum cat # ASIC-PAN-51-S (mixed 20 ul each of the following; total 100 ul)

Cat # ASIC11-S; #ASICB12-S, #MDEG11-S MDEG21-S, DRASIC31-S

Rabbit Aff pure IgG cat # ASIC-PAN-51-A (mixed 20 ug each of the following; total 100 ug)

Cat # ASIC11-A; #ASICB12-A, #MDEG11-A MDEG21-A, DRASIC31-A

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 1 mg/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 -200C and powder at 4oC or -20oC..

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).

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 1-20 ug/ml in paraformaldehyde fixed sections of tissues.

Specificity & Cross-reactivity

Please **see individual data sheets** for the specificity of each control peptide. 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: Waldmann, R et al (1997) Nature, 386, 173-177; Garcia-Anoveros j et al (1997) PNAS 94, 1459-1464; Waldmann, R et al (1996) J Biol. Chem. 271, 10433.

*This product is for In vitro research use only.

Related material available from ADI

Antibodies ASIC1-3; EnaCs (α, β, γ, and δ) CLC1-7 and CLC-K1; KCC1-4; NCKK1/2, TSC/NCC; KCNQ1-4; AQP-9 and RUT; OCT

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

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

ASIC-Pan-51-S-A-P

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