



## ASIC1 (C-13): sc-13910

### BACKGROUND

The ENaC/DEG superfamily consists of amiloride-sensitive sodium channels, including the vertebrate epithelial Na<sup>+</sup> channel (ENaC), the acid-sensing ionic channels (ASICs), which include ASIC1 (BNaC2), ASIC2 (BNaC1, BNC1, or MDEG1), ASIC3 (DRASIC), and ASIC4 (SPASIC), the *C. elegans* Degenerin family, and the snail FaNaC. The ASICs are proton-gated ion channels expressed in the brain and peripheral nervous system. They are involved in mechanoperception and/or nociception, and affect a range of sensory functions, including perception of touch, heat, sour taste, and pain. Specifically, ASIC2 may play a role in pH sensing in addition to a possible role as a central component of a mechanosensory complex. ASIC2 has a unique pattern of expression in adult human brain and spinal cord. The presence of BNC1 mRNA in malignant human gliomas, which express amiloride-sensitive Na<sup>+</sup> conductance, indicates that functional expression of amiloride-sensitive Na<sup>+</sup> currents is characteristic of malignant brain tumor cells. Therefore, this pathway may be a potential target for therapeutic intervention.

### REFERENCES

1. Price, M.P., et al. 1996. Cloning and expression of a novel human brain Na<sup>+</sup> channel. *J. Biol. Chem.* 271: 7879-7882.
2. Barbry, P., et al. 1997. Molecular biology of Na<sup>+</sup> absorption. *Am. J. Physiol.* 273: G571-585.
3. Bubien, J.K., et al. 1999. Malignant human gliomas express an amiloride-sensitive Na<sup>+</sup> conductance. *Am. J. Physiol.* 276: C1405-1410.
4. Price, M.P., et al. 2000. The mammalian sodium channel BNC1 is required for normal touch sensation. *Nature* 407: 1007-1011.
5. Alvarez de la Rosa, D., et al. 2002. Functional implications of the localization and activity of acid-sensitive channels in rat peripheral nervous system. *Proc. Natl. Acad. Sci. USA* 99: 2326-2331.
6. Bianchi, L., et al. 2002. Protons at the gate: DEG/ENaC ion channels help us feel and remember. *Neuron* 34: 337-340.

### SOURCE

ASIC1 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ASIC1 of human origin.

### PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-13910 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

### APPLICATIONS

ASIC1 (C-13) is recommended for detection of ASIC1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with ASIC-β.

Suitable for use as control antibody for ASIC1 siRNA (h): sc-42407.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### RESEARCH USE

For research use only, not for use in diagnostic procedures.