

# ASIC1 (H-70): sc-28756

## BACKGROUND

Degenerin/epithelial sodium channel (DEG/ENaC) superfamily members are amiloride-sensitive sodium channels that contain intracellular N- and C-termini, two hydrophobic transmembrane regions and a cysteine-containing extracellular loop. Acid sensing ion channel ASIC1, also designated ACCN2, BNAC2 and ASIC1a, is present in brain as a 4.3-kb transcript with localization to rat dorsal root ganglia. *In situ* hybridization of rat brain suggests that ASIC1 is most abundant in the main olfactory bulb, cerebral cortex, hippocampal formation, habenula, basolateral amygdaloid nuclei and cerebellum. ASIC1 and H<sup>+</sup>-gated currents may contribute to the development of fear and anxiety. ASIC2, also designated amiloride-sensitive cation channel 1, neuronal (ACCN1), mammalian degenerin, BNAC1 (MDEG) and brain Na<sup>+</sup> channel 1, mediates the normal detection of light touch. ASIC2 mRNA is abundant in brain, specifically in neurons. ASIC2 is expressed as 2.7- and 3.7-kb transcripts in brain and spinal cord tissues. ASIC3, also designated SLNAC1 and TNAC1, mediates detection of lasting pH changes and is involved in modulating moderate- to high-intensity pain sensation. ASIC4, also designated ACCN4 and BNAC4, is abundant in pituitary gland and is also present in the inner ear.

## REFERENCES

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3. Price, M.P., Lewin, G.R., McIlwrath, S.L., Cheng, C., Xie, J., Heppenstall, P.A., Stucky, C.L., Mannsfeldt, A.G., Brennan, T.J., Drummond, H.A., Qiao, J., Benson, C.J., Tarr, D.E., Hrstka, R.F., Yang, B., Williamson, R.A. and Welsh, M.J. 2000. The mammalian sodium channel BNC1 is required for normal touch sensation. *Nature* 407: 1007-1011.
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## CHROMOSOMAL LOCATION

Genetic locus: ASIC1 (human) mapping to 12q13.12; Accn2 (mouse) mapping to 15 F1.

## RESEARCH USE

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

## SOURCE

ASIC1 (H-70) is a rabbit polyclonal antibody raised against amino acids 505-574 mapping at the C-terminus 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.

## APPLICATIONS

ASIC1 (H-70) is recommended for detection of ASIC1 of human origin and ASIC1 isoforms  $\alpha$  and  $\beta$  of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

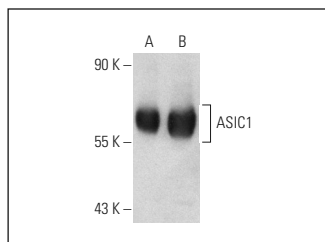
ASIC1 (H-70) is also recommended for detection of ASIC1 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for ASIC1 siRNA (h): sc-42407, ASIC1 siRNA (m): sc-42408, ASIC1 shRNA Plasmid (h): sc-42407-SH, ASIC1 shRNA Plasmid (m): sc-42408-SH, ASIC1 shRNA (h) Lentiviral Particles: sc-42407-V and ASIC1 shRNA (m) Lentiviral Particles: sc-42408-V.

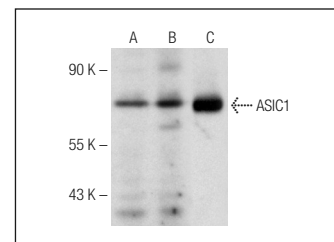
Molecular Weight of ASIC1: 60 kDa.

Positive Controls: mouse cerebellum extract: sc-2403, mouse brain extract: sc-2253 or rat brain extract: sc-2392.

## DATA



ASIC1 (H-70): sc-28756. Western blot analysis of ASIC1 expression in mouse brain (A) and rat brain (B) tissue extracts.



ASIC1 (H-70): sc-28756. Western blot analysis of ASIC1 expression in mouse brain (A), mouse cerebellum (B) and mouse pituitary (C) tissue extracts.

## 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.