SANTA CRUZ BIOTECHNOLOGY, INC.

HCN3 (H-150): sc-66918

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Hyperpolarization-activated, cyclic nucleotide-binding channels (HCN) are voltage-gated cation channels that are activated by direct binding of intracellular cyclic nucleotides. The HCN family consists of four members (HCN1-4), each with a core transmembrane segment domain and a C-terminal 120 amino acid cyclic nucleotide-binding domain motif. HCN channels are expressed in the brain, heart, thalamus and testis. The pacemaker properties of HCN channels contribute to spontaneous rhythmic activity in the brain and heart. HCN3 contains a segment characterized by a series of positively charged amino acids at every third position. This region, designated S4, is likely to be the voltage sensor of the protein. In the brain, HCN3 and HCN4 exhibit subcortical distribution mainly concentrated in the hypothalamus and thalamus, respectively.

REFERENCES

1. Notomi, T., et al. 2004. Immunohistochemical localization of Ih channel subunits, HCN1-4, in the rat brain. J. Comp. Neurol. 471: 241-276.
2. Bajorat, R., et al. 2005. Functional significance of HCN2/3-mediated I(h) in striatal cells at early developmental stages. J. Neurosci. Res. 82: 206-213.

CHROMOSOMAL LOCATION

Genetic locus: HCN3 (human) mapping to 1q22; Hcn3 (mouse) mapping to 3 F1.

SOURCE

HCN3 (H-150) is a rabbit polyclonal antibody raised against amino acids 625-774 mapping within a C-terminal cytoplasmic domain of HCN3 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

HCN3 (H-150) is recommended for detection of HCN3 of mouse, rat and human 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).

HCN3 (H-150) is also recommended for detection of HCN3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for HCN3 siRNA (h): sc-45651, HCN3 siRNA (m): sc-45652, HCN3 siRNA (r): sc-270293, HCN3 shRNA Plasmid (h): sc-45651-SH, HCN3 shRNA Plasmid (m): sc-45652-SH, HCN3 shRNA Plasmid (r): sc-270293-SH, HCN3 shRNA (h) Lentiviral Particles: sc-45651-V, HCN3 shRNA (m) Lentiviral Particles: sc-45652-V and HCN3 shRNA (r) Lentiviral Particles: sc-270293-V.

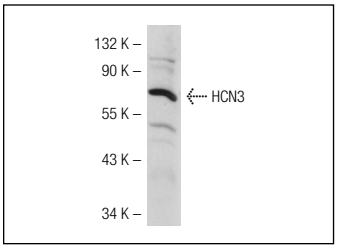
Molecular Weight of HCN3: 86 kDa.

Positive Controls: rat cerebellum extract: sc-2398 or rat brain extract: sc-2392.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



HCN3 (H-150): sc-66918. Western blot analysis of HCN3 expression in rat brain tissue extract.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS Satisfaction Guaranteed

Try **HCN3 (TLL6C5): sc-58621** or **HCN3 (B-12): sc-365451**, our highly recommended monoclonal alternatives to HCN3 (H-150).