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


CHROMOSOMAL LOCATION

Genetic locus: HCN3 (human) mapping to 1q22; Hcn3 (mouse) mapping to 3 F2.

SOURCE

HCN3 (TLL6C5) is a rat monoclonal antibody raised against a synthetic peptide of HCN3 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

HCN3 (TLL6C5) is recommended for detection of HCN3 of mouse, rat, human, bovine and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation (1-2 µg per 100-500 µg of total protein [1 ml of cell lysate]).


Molecular Weight of HCN3: 97 kDa.

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

DATA

Western blot analysis of HCN3 expression in rat brain tissue extract.

RESEARCH USE

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