

Kv1.1 Potassium Channel. Rabbit Polyclonal Antibody , Human, Mouse, Rat

Voltage-Gated Potassium Channel, Kv1.1 isoform

BACKGROUND

K⁺ channels from the Kv1 subfamily contain four alpha-subunits and the combinations (from Kv1.1-1.6) determine susceptibility to dendrotoxin (DTX) homologue.

Kv1.1, a Shaker-like voltage-gated potassium channel, is strongly expressed in a variety of neurons in adult rodents, in which it appears to be involved in regulating neuronal excitability. Here we show that Kv1.1 is also expressed during embryonic development in the mouse, exhibiting two transient peaks of expression around embryonic day 9.5 (E9.5) and E14.5.

Potassium channels play a critical role in limiting neuronal excitability. Mutations in certain voltage-gated potassium channels have been associated with hyperexcitable phenotypes in both humans and animals. However, only recently have mutations in potassium channel genes (i.e. KCNQ2 and KCNQ3) been discovered in a human epilepsy, benign familial neonatal convulsions.

ORDERING INFORMATION

CATALOG NUMBER
X1497P

SIZE
100 µg

FORM
Unconjugated

HOST/CLONE
Rabbit

FORMULATION
Provided as solution in phosphate buffered saline with 0.08% sodium azide

CONCENTRATION
1 mg/ml

ISOTYPE
IgG

APPLICATIONS
Western Blot

IMMUNOGEN

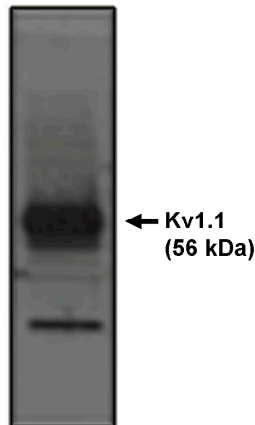
Synthetic peptide derived from the rat Kv1.1 potassium channel conjugated to KLH

SPECIES REACTIVITY

Human, Mouse, Rat

Legend:

Western blot analysis using Kv1.1 antibody on rat brain lysate.



For research use only. Not for use in human diagnostics or therapeutics.

POSITIVE CONTROL/TISSUE EXPRESSION

Rat brain lysate

COMMENTS

This antibody can be used for Western blotting (5-10 µg/ml). Optimal concentration should be evaluated by serial dilutions.

SHIP CONDITIONS

Ship at ambient temperature, freeze upon arrival

STORAGE CUSTOMER

Product should be stored at -20°C. Aliquot to avoid freeze/thaw cycles

STABILITY

Products are stable for one year from purchase when stored properly

REFERENCES

1. Baumann, A et al. Structure of the voltage-dependent potassium channel is highly conserved from *Drosophila* to vertebrate central nervous systems. *EMBO J.* 7 (8), 2457-2463 (1988)
2. Christie, M.J et al. Expression of a cloned rat brain potassium channel in *Xenopus* oocytes. *Science* 244 (4901), 221-224 (1989)
3. Hatton WJ, et al. Functional and molecular expression of a voltage-dependent K(+) channel (Kv1.1) in interstitial cells of Cajal. *J Physiol* 2001 Jun 1 533:Pt 2 315-27(2001)
4. Wang FC et al. alpha subunit compositions of Kv1.1-containing K+ channel subtypes fractionated from rat brain using dendrotoxins. *Eur J Biochem* Jul 263:1 230-7 (1999)
5. Folco E, et al. A cellular model for long QT syndrome. Trapping of heteromultimeric complexes consisting of truncated Kv1.1 potassium channel polypeptides and native Kv1.4 and Kv1.5 channels in the endoplasmic reticulum. *J Biol Chem* Oct 17 272:42 26505-10 (1997)
6. Roberds, S.L. Cloning and tissue-specific expression of five voltage-gated potassium channel cDNAs expressed in rat heart. *Proc. Natl. Acad. Sci. U.S.A.* 88 (5), 1798-1802 (1991)

LAST MODIFIED 8/30/2007

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