

Kv1.3 Potassium Channel. Rabbit Polyclonal Antibody , Human, Mouse, Rat

Voltage-Gated Potassium Channel, Kv1.3 isoform

BACKGROUND

The Kv1.3 potassium channel is a voltage-gated channel protein which belongs to the delayed rectifier class and to the Shaker potassium channel subfamily which includes Kv1.1, Kv1.2, Kv1.4 and Kv1.5. Potassium channels are mainly found in plasma membranes but are not generally distributed over the cell surface. Potassium channels catalyze the rapid permeation of potassium ions while rejecting biologically abundant potential competitors such as sodium, calcium and magnesium. Ion selectivity and high throughput rate of potassium channels is accomplished by precise co-ordination of dehydrated potassium by the protein and multiple ion occupancy within the permeation pathway. All potassium channels carry out the formation of a transmembrane leak specific for potassium ions. Since cells almost universally maintain cytoplasmic potassium concentrations higher than those extracellularly, the opening of a potassium channel implies a negative ongoing change in electrical voltage across the cell membrane. This may result in termination of the action potential of electrically excitable cells including nerve, muscle and pancreatic beta cells. In non-excitabile cells, potassium channels play important roles in the cellular potassium recycling required for electrolyte balance effected by the renal epithelium.

ORDERING INFORMATION

CATALOG NUMBER
X1499P

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

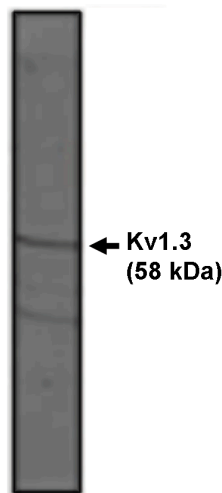
Synthetic peptide derived from the rat Kv1.3 potassium channel conjugated to KLH

SPECIES REACTIVITY

Human, Mouse, Rat

Legend:

Western blot analysis using Kv1.3 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. Stuhmer, W et.al. "Molecular basis of functional diversity of voltage-gated potassium channels in mammalian brain." EMBO J. 8 (11), 3235-3244 (1989)
2. Swanson, R et.al. "Cloning and expression of cDNA and genomic clones encoding threedelayed rectifier potassium channels in rat brain." Neuron 4 (6), 929-939 (1990)
3. Douglass, J et.al. "Characterization and functional expression of a rat genomic DNA clone encoding a lymphocyte potassium channel" J. Immunol. 144 (12), 4841-4850 (1990)
4. Chang, M.C. et.al "Regulation of Kv1.3 channels in activated human T lymphocytes by Ca(2+)-dependent pathways." Cell Physiol Biochem.11(3):123-34. 2001
5. Butchason, I., et. al. "Angular methoxy-substituted furo- and pyranoquinolinones as blockers of the voltage-gated potassium channel Kv1.3." J. Med. Chem. 44(8):1249-56 (2001).

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