

## Kv4.2 Potassium Channel. Rabbit Polyclonal Antibody, Human, Mouse, Rat

### BACKGROUND

The Kv4.2 potassium channel is a voltage-gated channel protein which belongs to the delayed rectifier class and to the Shal potassium channel subfamily. 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 through put 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**  
X1505P

**SIZE**  
100 µg

**FORM**  
Purified

**HOST/CLONE**  
Rabbit

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

**CONCENTRATION**  
1 mg/ml

**ISOTYPE**  
Polyclonal

**APPLICATIONS**  
Western Blotting

### IMMUNOGEN

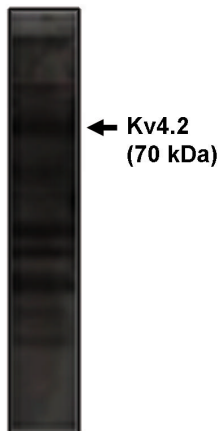
Synthetic peptide derived from the rat Kv4.2 potassium channel conjugated to KLH

### SPECIES REACTIVITY

Human, Mouse, Rat

### Legend:

Western blot analysis using Kv4.2 antibody on rat brain lysate.



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

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**POSITIVE CONTROL**

Not Available

**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 degrees C. Aliquot to avoid freeze/thaw cycles

**STABILITY**

Products are stable for one year from purchase when stored properly

**REFERENCES**

1. Roberds, S.L. et.al "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)
2. Bähring, K. et.al. "Kinetic analysis of open- and closed-state inactivation transitions in human Kv4.2 A-type potassium channels." J Physiol ;535(Pt 1):65-812001
3. Adams, T. et.al, "The A-type potassium channel Kv4.2 is a substrate for the mitogen-activated protein kinase ERK." J Neurochem 5(6):2277-87 2000

**LAST MODIFIED** 9/16/2002