



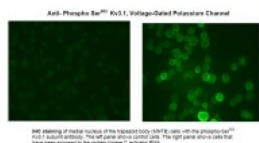
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## Potassium Channel (phospho Ser503) Antibody

CATALOG NUMBER: 50-235



IHC staining of medial nucleus of the trapezoid body (MNTB) cells with the phospho-Ser503 Kv3.1 subunit antibody. The left panel shows control cells. The right panel shows cells that have been exposed to the protein kinase C activator PMA.

### Specifications

<b>SPECIES REACTIVITY:</b>	Mouse, Rat
<b>TESTED APPLICATIONS:</b>	IHC, WB
<b>APPLICATIONS:</b>	The antibody has been directly tested for reactivity in Western blots with rat and mouse tissue.
<b>USER NOTE:</b>	Optimal dilutions for each application to be determined by the researcher.
<b>PREDICTED MOLECULAR WEIGHT:</b>	100
<b>IMMUNOGEN:</b>	Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser503 of the voltage-gated potassium channel Kv3.1, conjugated to keyhole limpet hemocyanin (KLH).
<b>HOST SPECIES:</b>	Rabbit

### Properties

<b>PURIFICATION:</b>	Affinity Purified
<b>PHYSICAL STATE:</b>	Liquid
<b>BUFFER:</b>	100 uL in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 ug per mL BSA and 50% glycerol.
<b>STORAGE CONDITIONS:</b>	Potassium Channel antibody can be stored at -20°C and is stable at -20°C for at least 1 year.
<b>CLONALITY:</b>	Polyclonal
<b>CONJUGATE:</b>	Unconjugated

### Additional Info

<b>ALTERNATE NAMES:</b>	Kv4, Kv3.1, KShIIIB, NGK2-KV4, NGK2,
<b>ACCESSION NO.:</b>	P25122

<b>PROTEIN GI NO.:</b>	116439
<b>OFFICIAL SYMBOL:</b>	Kcnc1
<b>GENE ID:</b>	25327

## Background

**BACKGROUND:** Voltage-gated K<sup>+</sup> channels are important determinants of neuronal membrane excitability. Moreover, differences in K<sup>+</sup> channel expression patterns and densities contribute to the variations in action potential waveforms and repetitive firing patterns evident in different neuronal cell types (Maletic-Savatic et al., 1995; Pongs, 1999; Blaine and Ribera, 1998; Burger and Ribera, 1996). The Kv3.1 potassium channel is expressed at high levels in neurons that characteristically fire rapid trains of action potentials (Gan et al., 1999). Particularly high levels of this channel are found in neurons of the auditory brainstem. These neurons appear to participate in neural circuits that determine the intensity and timing of auditory stimuli and use this information to determine the location of sounds in space (von Hehn et al., 2004).

- REFERENCES:**
- 1) Blaine JT, Ribera AB (1998) Heteromultimeric potassium channels formed by members of the Kv2 subfamily. *J Neurosci* 18:9585-9593.
  - 2) Burger C, Ribera AB (1996) *Xenopus* spinal neurons express Kv2 potassium channel transcripts during embryonic development. *J Neurosci* 16:1412-1421.
  - 3) Gan L, Hahn SJ, Kaczmarek LK (1999) Cell type-specific expression of the Kv3.1 gene is mediated by a negative element in the 5' untranslated region of the Kv3.1 promoter. *J Neurochem* 73:1350-1362.

**FOR RESEARCH USE ONLY**

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