

Phospho-Ser503 Kv3.1, Voltage-Gated, Potassium Channel Antibody
Affinity purified rabbit polyclonal antibody
Catalog # AN1066

Specification

Phospho-Ser503 Kv3.1, Voltage-Gated, Potassium Channel Antibody - Product Information

Application	IHC
Primary Accession	P25122
Reactivity	Mouse, Rat
Host	Rabbit
Clonality	polyclonal
Calculated MW	100 KDa

Phospho-Ser503 Kv3.1, Voltage-Gated, Potassium Channel Antibody - Additional Information

Gene ID	25327
Gene Name	KCNC1

Other Names

Potassium voltage-gated channel subfamily C member 1, NGK2, RAW2, Voltage-gated potassium channel subunit Kv31, Voltage-gated potassium channel subunit Kv4, Kcnc1

Target/Specificity

Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser503 conjugated to KLH.

Dilution

IHC~~ 1:1000

Format

Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

Antibody Specificity

Specific for the ~100k Kv3.1 voltage-gated potassium channel protein phosphorylated at Ser503.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Phospho-Ser503 Kv3.1, Voltage-Gated, Potassium Channel Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping

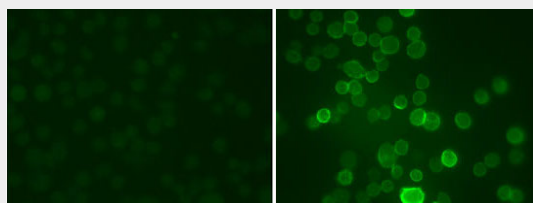
Blue Ice

Phospho-Ser503 Kv3.1, Voltage-Gated, Potassium Channel Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Phospho-Ser503 Kv3.1, Voltage-Gated, Potassium Channel Antibody - Images



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.

Phospho-Ser503 Kv3.1, Voltage-Gated, Potassium Channel Antibody - Background

Voltage-gated K⁺ channels are important determinants of neuronal membrane excitability. Moreover, differences in K⁺ 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).

Phospho-Ser503 Kv3.1, Voltage-Gated, Potassium Channel Antibody - References

Blaine JT, Ribera AB (1998) Heteromultimeric potassium channels formed by members of the Kv2 subfamily. *J Neurosci* 18:9585-9593.

Burger C, Ribera AB (1996) Xenopus spinal neurons express Kv2 potassium channel transcripts during embryonic development. *J Neurosci* 16:1412-1421.

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.

Maletic-Savatic M, Lenn NJ, Trimmer JS (1995) Differential spatiotemporal expression of K⁺ channel polypeptides in rat hippocampal neurons developing in situ and in vitro. *J Neurosci* 15:3840-3851.

Pongs O (1999) Voltage-gated potassium channels: from hyperexcitability to excitement. *FEBS Lett* 452:31-35.

von Hehn CA, Bhattacharjee A, Kaczmarek LK (2004) Loss of Kv3.1 tonotopicity and alterations in cAMP response element-binding protein signaling in central auditory neurons of hearing impaired mice. *J Neurosci* 24:1936-1940.

Ping Song and Leonard K. Kaczmarek (2006) Modulation of Kv3.1b Potassium Channel
Phosphorylation in Auditory
Neurons by Conventional and Novel Protein Kinase C IsozymesJ. Biol. Chem., Jun
2006; 281: 15582 - 15591