

Kv2.2

Rudolf-Wissell-Str. 28 37079 Göttingen, Germany

Phone: +49 551-50556-0
Fax: +49 551-50556-384
E-mail: sales@sysy.com
Web: www.sysy.com

Cat.No. 231 103; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 μg specific antibody, lyophilized. Affinity purified with the immunogen. Rabbit serum albumin was added for stabilization. For reconstitution add 50 μl H $_2$ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	WB: 1: 1000 (AP staining) IP: yes ICC: not tested yet IHC: not tested yet IHC-P/FFPE: not tested yet
Immunogen	Synthetic peptide corresponding to AA 859 to 873 from rat Kv2.2 (UniProt Id: Q63099)
Reactivity	Reacts with: rat (Q63099), mouse (A6H8H5). No signal: zebrafish. Other species not tested yet.
Specificity	Specific for Kv 2.2.
matching control	231-1P

TO BE USED IN VITRO / FOR RESEARCH ONLY NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Voltage-gated potassium (Kv) channels regulate many aspects of neuronal excitability like shaping of action potentials or modulating of spike patterns.

Mammalian neurons express more than 20 different Kv subunits that can be subdivided into 12 families. Heteromeric assembly of four subunits and differential phosphorylation of Kv channels give rise to a huge molecular and functional diversity.

The Kv 2 subfamily comprising **Kv 2.1** (DRK 1, Kcnb 1) and **Kv 2.2** (CDRK, Kcnb 2) is a unique exception since they do not form heterodimers. Kv 2.1 is found in large clusters on the soma and proximal dendrites of pyramidal neurons.

Selected General References

Formation of heteromeric Kv2 channels in mammalian brain neurons.

Kihira Y, Hermanstyne TO, Misonou H

The Journal of biological chemistry (2010) 285(20): 15048-55.

Immunolocalization of the voltage-gated potassium channel Kv2.2 in GABAergic neurons in the basal forebrain of rats and mice.

Hermanstyne TO, Kihira Y, Misono K, Deitchler A, Yanagawa Y, Misonou H

The Journal of comparative neurology (2010) 518(21): 4298-310.

Intracellular regions of potassium channels: Kv2.1 and heag.

Wray [

European biophysics journal: EBJ (2009) 38(3): 285-92.

Glutamate transporters regulate extrasynaptic NMDA receptor modulation of Kv2.1 potassium channels.

Mulholland PJ, Carpenter-Hyland EP, Hearing MC, Becker HC, Woodward JJ, Chandler LJ

The Journal of neuroscience: the official journal of the Society for Neuroscience (2008) 28(35): 8801-9.

Target soluble N-ethylmaleimide-sensitive factor attachment protein receptors (t-SNAREs) differently regulate activation and inactivation gating of Kv2.2 and Kv2.1: Implications on pancreatic islet cell Kv channels.

Wolf-Goldberg T, Michaelevski I, Sheu L, Gaisano HY, Chikvashvili D, Lotan I

Molecular pharmacology (2006) 70(3): 818-28.

Molecular rearrangements of the Kv2.1 potassium channel termini associated with voltage gating.

Kobrinsky E, Stevens L, Kazmi Y, Wray D, Soldatov NM

The Journal of biological chemistry (2006) 281(28): 19233-40.

Kv2.1 potassium channels are retained within dynamic cell surface microdomains that are defined by a perimeter fence.

O'Connell KM, Rolig AS, Whitesell JD, Tamkun MM

The Journal of neuroscience: the official journal of the Society for Neuroscience (2006) 26(38): 9609-18.

Graded regulation of the Kv2.1 potassium channel by variable phosphorylation.

Park KS, Mohapatra DP, Misonou H, Trimmer JS

Science (New York, N.Y.) (2006) 313(5789): 976-9.

A novel targeting signal for proximal clustering of the Kv2.1 K+ channel in hippocampal neurons.

Lim ST, Antonucci DE, Scannevin RH, Trimmer JS

Neuron (2000) 25(2): 385-97.

Phosphorylation of the Kv2.1 K+ channel alters voltage-dependent activation.

Murakoshi H. Shi G. Scannevin RH. Trimmer JS

Molecular pharmacology (1997) 52(5): 821-8.

Expression of Kv2.1 delayed rectifier K+ channel isoforms in the developing rat brain.

Trimmer JS

FEBS letters (1993) 324(2): 205-10.

CDRK and DRK1 K+ channels have contrasting localizations in sensory systems.

Hwang PM, Cunningham AM, Peng YW, Snyder SH

Neuroscience (1993) 55(3): 613-20.

Heterologous expression of the human potassium channel Kv2.1 in clonal mammalian cells by direct cytoplasmic microinjection of cRNA.

Ikeda SR, Soler F, Zühlke RD, Joho RH, Lewis DL

Pflugers Archiv: European journal of physiology (1992) 422(2): 201-3.