

Anti-Voltage Gated Potassium Channel, Kv2.2 Subunit

CATALOG NO.: XPS-2027

FORM: Affinity Purified

BACKGROUND:

Voltage-gated K^+ channels are important determinants of neuronal membrane excitability, and 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. The delayed rectifier-type (I_K) channels (Kv1.5, Kv2.1, and Kv2.2) are expressed on all neuronal somata and proximal dendrites and are also found in a wide variety of non-neuronal cell types including pancreatic islets, alveolar cells and cardiac myocytes. Kv2.1 and Kv2.2 form distinct populations of K^+ channels and these subunits are thought to be primarily responsible for I_K in superior cervical ganglion cells.

SOURCE:

Rabbit anti-Potassium Channel, Kv2.2 Subunit polyclonal antibody was raised against a synthetic peptide specific for the Kv2.2 subunit in *Xenopus* and rodent conjugated to keyhole limpet hemocyanin (KLH). Rabbit anti-Potassium Channel, Kv2.2 Subunit was prepared from rabbit serum by affinity purification using a Sulfo-Link column matrix to which the peptide immunogen was coupled.

APPLICATION:

This polyclonal antibody can be used for specific immunolabeling of the ~125k Kv 2.2 protein in Western blots. Applications include Dot Blots (DB), Immunohistochemistry (IHC) and Western Blots (WB). Rabbit anti-Potassium Channel, Kv2.2 recognizes Kv2.2 in rat and *Xenopus*. When internally tested under ideal conditions the working dilutions were 1:1000 for IHC, DB and WB.

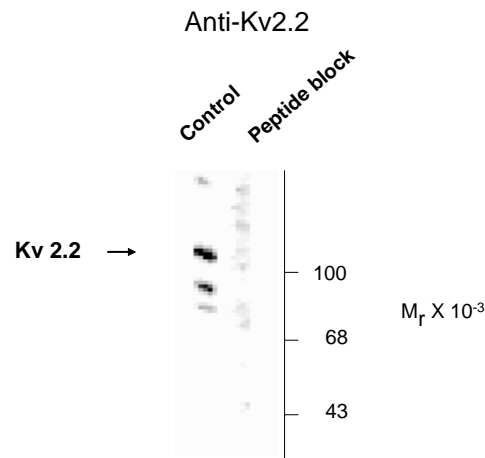


Figure: Western blot of rat brain homogenate. As shown in the autoradiograph, the antibody is specific for the ~125k Kv2.2 protein and the labeling is blocked by preadsorption with the immunizing peptide. **This product is for research use only.**



STORAGE:

It is supplied as affinity purified polyclonal antibody, 100 μ l in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 μ g per ml BSA and 50% glycerol. There is adequate amount of material to conduct 10-mini Western Blots. For long term storage -80°C is recommended, but shorter term storage at -20°C is also acceptable as aliquots may be taken without freeze/thawing due to the presence of 50% glycerol. Stock solutions are stable for a minimum of 1 year at -20°C .

REFERENCES:

1. Burger, C. and Ribera, A.B. "Xenopus spinal neurons express Kv2 potassium channel transcripts during embryonic development," *J Neurosci.* **16** (1996) 1412 - 1421.
2. Pongs, O. "Voltage-gated potassium channels: from hyperexcitability to excitement," *FEBS Lett.* **452** (1999) 31 - 35.
3. Maletic-Savatic, M., Lenn, N.J., and Trimmer, J.S. "Differential spatiotemporal expression of K^+ channel polypeptides in rat hippocampal neurons developing *in situ* and *in vitro*," *J Neurosci.* **15** (1995) 3840 - 3851.
4. Hwang, P.M., Fotuhi, M., Bredt, D.S., Cunningham, A.M., and Snyder, S.H. "Contrasting immunohistochemical localizations in rat brain of two novel K^+ channels of the Shab subfamily," *J. Neurosci.*, **13** (1993) 1569 - 1576.