3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

ProductInformation

Anti-Potassium Channel K_V11.2 (erg2)
produced in rabbit, affinity isolated antibody

Catalog Number **K0765**

Product Description

Anti-Potassium Channel K_V11.2 (erg2) (Voltage gated K^+ channel subfamily H member 6, KCNH6, ether-a-go-go-related channel 2) is produced in rabbit using as immunogen the peptide TLNFVEFNLEKHRS(C), corresponding to residues 185-198 of human K_V11.2 located in the N-terminal part of human K_V11.2. The antibody is affinity purified on immobilized antigen.

Anti- K_V11.2 (erg2) antibody recognizes rat Kcnh6 (Gene ID 116745). Rat and chicken have 100% homology, in mouse 13 out of 14 residues are identical. The antibody has been used in immunoblotting and immunohistochemistry.

K_V11.2 (erg2) is a member of the *ether-a-go-go* (EAG) subfamily of voltage-dependent K^+ channels. The erg subfamily includes the closely related proteins K_V11.1 (erg1) and K_V11.3 (erg3) that possess the signature structure of the voltage-dependent K^+ channels: six membrane-spanning domains with intracellular N- and C-termini. As with all voltage-dependent K^+ channels, the functional channel is a tetramer composed of four subunits. It has been suggested that the K_V11 subfamily members can form functional heteromultimers within the subfamily.

K_V11.2 produces currents characterized by strong inward rectification with slow activation and very rapid inactivation kinetics, which closely resemble those produced by the much studied channel K_V11.1. The expression of K_V11.2 seems to be limited to the brain and the pituitary gland. The same is true for the K_V11.3 protein, while K_V11.1 is more widely expressed. From a pharmacological point of view, K_V11.2 channels can be blocked by well-characterized organic blockers such as the antiarrhythmic drug E-4031, Catalog Number M5060.

Reagent

Supplied as a lyophilized powder from phosphate buffered saline, pH 7.4, containing 1% BSA and 0.025% sodium azide.

Reconstitution

Reconstitute the lyophilized powder with 50 µL or 200 µL deionized water, depending on package size. Further dilutions should be made using a carrier protein such as BSA (1-3%).

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

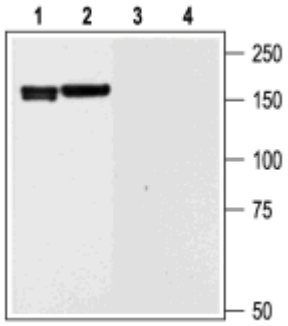
Store at –20 °C. Upon initial thawing freeze the solution in working aliquots for extended storage. Avoid repeated freezing and thawing, or storage in frost-free freezers, to prevent denaturing the antibody. Working dilution samples should be discarded if not used within 12 hours. The antibody is stable for at least 12 months when stored appropriately.

Product Profile

Immunoblotting: a recommended working dilution of 1:200 was determined using rat brain and rat cortex lysates.

Immunohistochemistry: rat brain sections

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.



Immunoblot

Lanes 1 and 3 rat brain lysates
Lanes 2 and 4 rat cortex lysates:

Lanes 1, 2. Anti-K_V11.2 (erg2) antibody (1:200).
Lanes 3, 4. Anti-K_V11.2 (erg2) antibody, preincubated with the control peptide antigen

.

References

1. Shi, W.M. *et al, J. Neurosci.* **17,** 9423 (1997).
2. Wimmers, S. *et al., Pflugers Arch.* **441,** 450 (2001).
3. Schwarz, J.R. and Bauer, C.K. *J. Cell. Mol. Med.* **8,** 22 (2004).

AH,PHC 04/07-1