

## Product Information

### Anti-KV Channel Interacting Protein 2

Developed in Rabbit  
Affinity Isolated Antibody

Product Number **K 4513**

#### Product Description

Anti-KV Channel Interacting Protein 2 is developed in rabbit using a synthetic peptide corresponding to amino acid residues 6-24 of human Kv channel interacting protein 2 (KChIP2) as immunogen. This sequence is completely conserved in mouse and rat. The antibody is purified by immunoaffinity chromatography.

Anti-KV Channel Interacting Protein 2 detects KV Channel Interacting Protein 2 (KChIP2) b and c from rat and rabbit samples as well as recombinant rat KChIP 2c protein. This antibody does not detect KChIP 2a. By immunoblotting, this antibody detects ~33 and ~26 kDa proteins representing KChIP b and c, respectively, from rat ventricular myocyte whole cell lysate.

Voltage-gated potassium (Kv) channels are key components of the potassium currents in the heart and central nervous system. Kv4 channels in the heart are involved in the repolarization phase of the action potential. However, in the brain, these channels prevent reverse-propagation of action potentials. Associated with Kv4 channels are a group of calcium-binding proteins termed KChIPs (Kv channel interacting proteins). KChIPs are small molecular weight proteins that bind to the cytoplasmic amino terminus of Kv4  $\alpha$ -subunits and help modulate its function.

There are three known KChIPs; KChIP1 expressed in the brain; KChIP2 (three isoforms, a, b, and c) expressed in the brain, heart, and lung, and KChIP3 (also known as calsenilin and DREAM (downstream regulatory elements (DRE)-antagonist modulator) expressed in the brain and testis.

#### Reagent

Anti-KV Channel Interacting Protein 2 is supplied in phosphate buffered saline (PBS), pH 7.4, containing 1 mg/ml bovine serum albumin (BSA), and 0.05% sodium azide.

#### Precautions and Disclaimer

Due to the sodium azide content a material safety data sheet (MSDS) has been sent to the attention of the safety officer at your institution. Consult the MSDS for information regarding hazards and safe handling practices.

#### Storage/Stability

Store at  $-20^{\circ}\text{C}$ . For extended storage, freeze at  $-20^{\circ}\text{C}$  in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

#### Product Profile

For immunoblotting, the minimum recommended working antibody concentration is 2  $\mu\text{g}/\text{ml}$  using rat ventricular myocyte whole cell lysate.

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

## References

1. Jo, D.G., et al., Pro-apoptotic function of calseinilin/DREAM/KChIP3. *FASEB J.*, **15**, 589-591 (2001).
2. Rosati, B., et al., Regulation of KChIP2 potassium channel  $\beta$  subunit gene expression underlies the gradient of transient outward current in canine and human ventricle. *J. Physiol.*, **533**, 119-125 (2001).
3. Shibata, R., et al., A fundamental role for KChIPs in determining the molecular properties and trafficking of Kv4.2 potassium channels. *J. Biol. Chem.*, **278**, 3645-36454 (2003).
4. An, W.F., et al., Modulation of A-type potassium channels by a family of calcium sensors. *Nature*, **403**, 553-556 (2000).

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