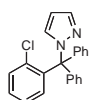


## TRAM-34: Potent intermediate-conductance Ca<sup>2+</sup>-activated K<sup>+</sup> channel blocker

Prod. Code **T 6700**



Used to prevent vascular restenosis following balloon angioplasty. Displays a 100-fold selectivity ( $K_d = 20$  nM) for  $IK_{Ca1}$  channels over other K<sup>+</sup> channels (Charybdotoxin,  $K_d = 5$  nM, Clotrimazole,  $K_d = 70$  nM; Nitrendipine  $K_d = 900$  nM).

### References

- Wulff, J. et al., Design of a potent and selective inhibitor of the intermediate-conductance Ca<sup>2+</sup>-activated K<sup>+</sup> channel,  $IK_{Ca1}$ : a potential immunosuppressant. *Proc. Natl. Acad. Sci. USA*, **97**, 8151-8156 (2000).
- Chandy, K.G., et al., K<sup>+</sup> channels as targets for specific immunomodulation. *Trends Pharmacol. Sci.*, **25**, 280-289 (2004).

### Related Products

Product Name	Descriptor	Prod. Code
Charybdotoxin	Ca <sup>2+</sup> -activated K <sup>+</sup> channel inhibitor	<b>C 5856</b>
NS309	Intermediate-conductance Ca <sup>2+</sup> -activated K <sup>+</sup> channel activator	<b>N 8161</b>
Anti-Potassium Channel KCa3.1 (Intermediate-conductance Ca <sup>2+</sup> -activated K <sup>+</sup> Channel 4) (rabbit)		<b>P 4997</b>

## Monoclonal Anti-Potassium Channel KCNK9 (TASK-3)

Prod. Code: **K 0514**

Clone Name: KCN, developed in mouse

Product Form: Purified mouse immunoglobulin

Immunogen: Synthetic peptide corresponding to amino acids 360-374 in the C-terminus of human KCNK9

Isotype: IgG2b

Species Cross Reactivity: human

KCNK9 or TASK-3 (TWIK-related Acid sensitive K<sup>+</sup> channel, K2P9.1) is a member of the potassium channel family of proteins that contain two-pore domains and four transmembrane domains. These channels are characterized as leaky K<sup>+</sup> channels that are sensitive to changes in the extracellular pH. The physiological functions of TASK channels are largely unknown. It has been proposed that they may be involved in the regulation of breathing, aldosterone secretion and anesthetic-mediated neuronal activity. [1-4].

Applications: Immunoblotting, immunocytochemistry, ELISA

### References

- Kim, Y., et al., TASK-3, a new member of the tandem pore K(+) channel family. *J. Biol. Chem.*, **275**, 9340-9347 (2000).
- Talley, E.M., et al., Modulation of TASK-1 (Kcnk3) and TASK-3 (Kcnk9) potassium channels: volatile anesthetics and neurotransmitters share a molecular site of action. *J. Biol. Chem.*, **277**, 17733-17742 (2002).
- Talley, E.M., et al., CNS distribution of members of the two-pore-domain (KCNK) potassium channel family. *J. Neurosci.*, **21**, 7491-7505 (2001).
- Pei, L., Oncogenic potential of TASK3 (Kcnk9) depends on K<sup>+</sup> channel-function. *Proc. Natl. Acad. Sci. USA*, **100**, 7803-7807 (2003).

### Related Products

Product Name	Host	Prod. Code
Anti-Potassium Channel TASK-1 (KCNK3)	Rabbit	<b>P 0981</b>
Anti-Potassium Channel TASK-2 (KCNK5)	Rabbit	<b>P 1106</b>
Anti-Potassium Channel K2P9.1 (TASK-3) (KCNK9)	Rabbit	<b>P 5247</b>

## Anti-Frizzled (FZD) Antibodies

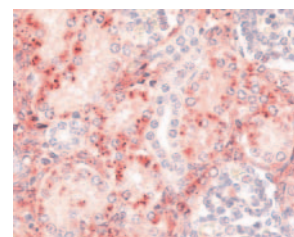
Prod. Code: See table below

Product Form: Developed in rabbit, affinity isolated antibodies

Immunogen: Synthetic peptides

Species Cross Reactivity: human

Wnt-Frizzled signaling is an essential component of early development regulating cell fate, polarity, differentiation, migration, formation of neural synapses and the regulation of proliferation. Frizzled proteins are GPCRs for secreted Wnt proteins, as well as other ligands. They have been identified in a range of animal species, from sponges to humans [1,2]. Wnt1 is an oncogene that causes mouse mammary tumorigenesis. Defective Wnt signaling plays major roles in diseases such as cancer (for example, colorectal cancer and melanomas) and osteoporosis [3]. Therefore, Wnt signal transduction components represent promising targets in the search for novel cancer therapeutic agents.



Immunochemical staining of fetal kidney using Rabbit Anti-Frizzled-2 (Prod. Code **F 3304**).

### Applications:

Immunohistochemistry

### References

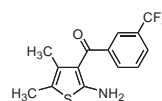
- Huang, H.C. and Klein, P.S., The Frizzled family: receptors for multiple signal transduction pathways. *Genome Biol.*, **5**, 234 (2004).
- Vincan, E., Frizzled/WNT signalling: the insidious promoter of tumour growth and progression. *Front. Biosci.*, **9**, 1023-1034 (2004).
- Wang, H.Y. and Malbon, C.C., Wnt-frizzled signaling to G-protein-coupled effectors. *Cell Mol. Life Sci.*, **61**, 69-75 (2004).

### New Frizzled Antibodies

Product Name	Host	Prod. Code
Anti-Frizzled-1 (FZD-1)	Rabbit	<b>F 3804</b>
Anti-Frizzled-2 (FZD-2)	Rabbit	<b>F 3304</b>
Anti-Frizzled-3 (FZD-3)	Rabbit	<b>F 3179</b>
Anti-Frizzled-4 (FZD-4)	Rabbit	<b>F 3429</b>
Anti-Frizzled-7 (FZD-7)	Rabbit	<b>F 3679</b>
Anti-Frizzled-10 (FZD-10)	Rabbit	<b>F 3554</b>

## PD 81,723: Allosteric enhancer of agonist binding to A<sub>1</sub> adenosine receptors

Prod. Code **P 1123**



PD 81,723 (30 μM) decreases the EC<sub>50</sub> value for adenosine to prolong the S-H interval by nine-fold in guinea pig isolated heart; 3 mg/kg enhances the neuro-protective and anticonvulsant effects of adenosine following the induction of hyperglycemic ischemia in rats.

### References

- Kollias-Baker, C., et al., Allosteric enhancer PD 81,723 acts by novel mechanism to potentiate cardiac actions of adenosine. *Circ. Res.*, **75**, 961-971 (1994).
- Meno, J.R., et al., Hippocampal injury and neurobehavioral deficits are improved by PD 81,723 following hyperglycemic cerebral ischemia. *Exp. Neurol.*, **183**, 188-196 (2003).
- Janusz, C.A. and Berman, R.F., The adenosine binding enhancer, PD 81,723, inhibits epileptiform bursting in the hippocampal brain slice. *Brain Res.*, **619**, 131-136 (1993).