

Store at
-20C
#74748**Kv4.2 (D3E7G) Rabbit mAb**

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R	Endogenous	70	Rabbit IgG	#Q9NZV8	3751

Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Kv4.2 (D3E7G) Rabbit mAb recognizes endogenous levels of total Kv4.2 protein. This antibody does not cross-react with Kv4.1 and Kv4.3 proteins.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human Kv4.2 protein.

Background

Kv4.2 is a voltage-gated potassium channel that belongs to the Shal-related subfamily. Kv4.2 mediates K⁺ transport in excitable membranes primarily in the brain, where it regulates neuronal excitability, synaptic plasticity, and the circadian rhythm of locomotor activity (1-6). In rodent heart, Kv4.2 mediates the transient outward current (I_{to}), which contributes to early repolarization and the cardiac action potential (7). Kv4.2 can form homotetramers or heterotetramers with other members of the Shal-related subfamily. Interaction with modulating β subunits such as KChIP family proteins modulates Kv4.2 expression at cell surface and its channel activity (8-10).

Background References

1. Serôdio, P. and Rudy, B. (1998) *J Neurophysiol* 79, 1081-91.
2. Shibata, R. et al. (2000) *J Neurosci* 20, 4145-55.
3. Zhao, C. et al. (2011) *Hippocampus* 21, 288-97.
4. Granados-Fuentes, D. et al. (2012) *J Neurosci* 32, 10045-52.
5. Labno, A. et al. (2014) *PLoS One* 9, e84086.
6. Yao, J.J. et al. (2016) *J Biol Chem* 291, 17369-81.
7. Yeola, S.W. and Snyder, D.J. (1997) *Cardiovasc Res* 33, 540-7.
8. Kim, L.A. et al. (2004) *J Biol Chem* 279, 5549-54.
9. Jerng, H.H. et al. (2004) *Biophys J* 87, 2380-96.
10. Kitazawa, M. et al. (2014) *J Biol Chem* 289, 17597-609.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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