

Product datasheet for **TA326401**

KCNQ4 Mouse Monoclonal Antibody [Clone ID: S43-6]

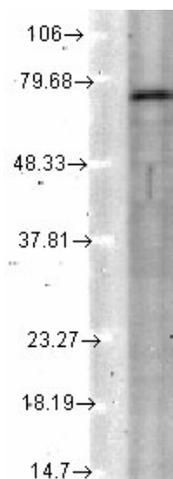
Product data:

Product Type:	Primary Antibodies
Clone Name:	S43-6
Applications:	IHC, WB
Recommend Dilution:	WB: 1-10ug/ml, IHC: 0.1-1.0ug/ml, IF: 1.0-10ug/ml
Reactivity:	Human, Mouse, Rat
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Fusion protein amino acids 2-77 of human KCNQ4
Formulation:	PBS pH7.4, 50% glycerol, 0.09% sodium azide
Concentration:	1 mg/ml
Purification:	Protein G Purified
Gene Name:	potassium voltage-gated channel subfamily Q member 4
Database Link:	NP_751895 Entrez Gene 60613 MouseEntrez Gene 298496 RatEntrez Gene 9132 Human

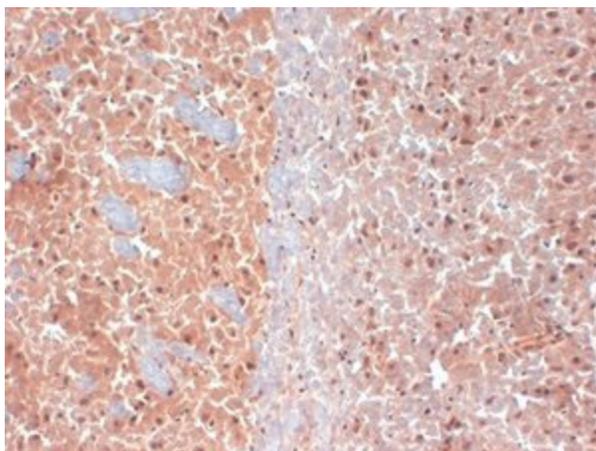


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Background:	<p>Ion channels are integral membrane proteins that help establish and control the small voltage gradient across the plasma membrane of living cells by allowing the flow of ions down their electrochemical gradient . They are present in the membranes that surround all biological cells because their main function is to regulate the flow of ions across this membrane. Whereas some ion channels permit the passage of ions based on charge, others conduct based on a ionic species, such as sodium or potassium. Furthermore, in some ion channels, the passage is governed by a gate which is controlled by chemical or electrical signals, temperature, or mechanical forces. There are a few main classifications of gated ion channels. There are voltage- gated ion channels, ligand- gated, other gating systems and finally those that are classified differently, having more exotic characteristics. The first are voltage- gated ion channels which open and close in response to membrane potential. These are then separated into sodium, calcium, potassium, proton, transient receptor, and cyclic nucleotide-gated channels; each of which is responsible for a unique role. Ligand-gated ion channels are also known as ionotropic receptors, and they open in response to specific ligand molecules binding to the extracellular domain of the receptor protein. The other gated classifications include activation and inactivation by second messengers, inward-rectifier potassium channels, calcium-activated potassium channels, two-pore-domain potassium channels, light-gated channels, mechano-sensitive ion channels and cyclic nucleotide-gated channels. Finally, the other classifications are based on less normal characteristics such as two-pore channels, and transient receptor potential channels .Specifically, the protein encoded by this gene forms a potassium channel that is thought to play a critical role in the regulation of neuronal excitability , particularly in sensory cells of the cochlea . The current generated by this channel is inhibited by M1 muscarinic acetylcholine receptors and activated by retigabine, a novel anti-convulsant drug .</p>
Synonyms:	DFNA2; DFNA2A; KV7.4
Note:	Detects ~77kDa.
Protein Families:	Druggable Genome, Ion Channels: Potassium, Transmembrane

Product images:

Western blot analysis of KCNQ4 in rat tissue lysates using a 1:1000 dilution of the antibody



IHC analysis of KCNQ4 in frozen sections of mouse brain extract using the antibody