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KCNQ4 Polyclonal Antibody

Catalog # AP70642

Product Information

Application	WB, E, IHC-P
Primary Accession	P56696
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	77101

Additional Information

Gene ID	9132
Other Names	KCNQ4; Potassium voltage-gated channel subfamily KQT member 4; KQT-like 4; Potassium channel subunit alpha KvLQT4; Voltage-gated potassium channel subunit Kv7.4
Dilution	WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/5000. Not yet tested in other applications. E~~N/A IHC-P~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

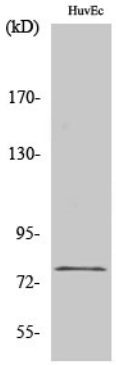
Name	KCNQ4 (HGNC:6298)
Function	Pore-forming subunit of the voltage-gated potassium (Kv) channel involved in the regulation of sensory cells excitability in the cochlea (PubMed:10025409, PubMed:34767770). KCNQ4/Kv7.4 channel is composed of 4 pore-forming subunits assembled as tetramers (PubMed:34767770). Promotes the outflow of potassium ions in the repolarization phase of action potential which plays a role in regulating membrane potential of excitable cells (PubMed:10025409, PubMed:11245603, PubMed:34767770). The channel conducts a slowly activating and deactivating current (PubMed:10025409, PubMed:11245603). Current often shows some inward rectification at positive potentials (PubMed:10025409). Channel may be selectively permeable in vitro to other cations besides potassium, in decreasing order of affinity K(+) = Rb(+) > Cs(+) > Na(+) (PubMed:10025409). Important for normal physiological function of inner ear such as sensory perception of sound (PubMed:10025409, PubMed:10369879).
Cellular Location	Basal cell membrane {ECO:0000250|UniProtKB:Q9JK96}; Multi-pass

	membrane protein. Note=Situated at the basal membrane of cochlear outer hair cells. {ECO:0000250|UniProtKB:Q9JK96}
Tissue Location	Expressed in the outer, but not the inner, sensory hair cells of the cochlea (PubMed:10025409). Slightly expressed in heart, brain and skeletal muscle (PubMed:10025409)

Background

Probably important in the regulation of neuronal excitability. May underlie a potassium current involved in regulating the excitability of sensory cells of the cochlea. KCNQ4 channels are blocked by linopirdin, XE991 and bepridil, whereas clofilium is without significant effect. Muscarinic agonist oxotremorine-M strongly suppress KCNQ4 current in CHO cells in which cloned KCNQ4 channels were coexpressed with M1 muscarinic receptors.

Images



Western Blot analysis of various cells using KCNQ4 Polyclonal Antibody

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.