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Anti-Kv7.4 Antibody

Catalog # AP51823

Product Information

Application	WB
Primary Accession	P56696
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	77101

Additional Information

Gene ID	9132
Other Names	Potassium voltage-gated channel subfamily KQT member 4; KQT-like 4; Potassium channel subunit alpha KvLQT4; Voltage-gated potassium channel subunit Kv7.4
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human Kv7.4. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000)
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

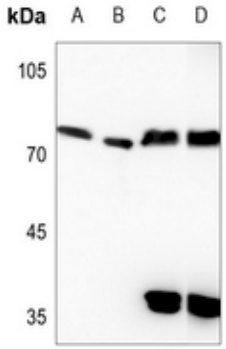
Name	KCNQ4 (HGNC:6298)
Function	Pore-forming subunit of the voltage-gated potassium (Kv) channel involved in the regulation of sensory cells excitability in the cochlea (PubMed:10025409, PubMed:34767770). KCNQ4/Kv7.4 channel is composed of 4 pore-forming subunits assembled as tetramers (PubMed:34767770). 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)

References

Kubisch C.,et al.Cell 96:437-446(1999).
Gregory S.G.,et al.Nature 441:315-321(2006).
Selyanko A.A.,et al.J. Physiol. (Lond.) 522:349-355(2000).
Soegaard R.,et al.Am. J. Physiol. 280:C859-C866(2001).
Howard R.J.,et al.Neuron 53:663-675(2007).

Images



Western blot analysis of Kv7.4 expression in PC12 (A), H446 (B), mouse liver (C), rat liver (D) whole cell lysates. (Predicted band size: 77 kD; Observed band size: 77 kD)

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