

**Kv7.4 Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP51823****Specification**

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**Kv7.4 Antibody - Product Information**

Application	WB, E
Primary Accession	<a href="#">P56696</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	77 KDa

**Kv7.4 Antibody - 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 Kv74, KCNQ4

**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~~1:1000

E~~N/A

**Format**

0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

**Storage**

Store at -20 °C. Stable for 12 months from date of receipt

**Kv7.4 Antibody - 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:<a href="http://www.uniprot.org/citations/10025409" target="\_blank">10025409</a>, PubMed:<a href="http://www.uniprot.org/citations/34767770" target="\_blank">34767770</a>). KCNQ4/Kv7.4 channel is composed of 4 pore-forming subunits assembled as tetramers (PubMed:<a href="http://www.uniprot.org/citations/34767770" target="\_blank">34767770</a>). 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:<a

[10025409](http://www.uniprot.org/citations/10025409), PubMed: [11245603](http://www.uniprot.org/citations/11245603), PubMed: [34767770](http://www.uniprot.org/citations/34767770)). The channel conducts a slowly activating and deactivating current (PubMed: [10025409](http://www.uniprot.org/citations/10025409), PubMed: [11245603](http://www.uniprot.org/citations/11245603)). Current often shows some inward rectification at positive potentials (PubMed: [10025409](http://www.uniprot.org/citations/10025409)). Channel may be selectively permeable in vitro to other cations besides potassium, in decreasing order of affinity  $K(+) = Rb(+) > Cs(+) > Na(+)$  (PubMed: [10025409](http://www.uniprot.org/citations/10025409)). Important for normal physiological function of inner ear such as sensory perception of sound (PubMed: [10025409](http://www.uniprot.org/citations/10025409), PubMed: [10369879](http://www.uniprot.org/citations/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)

### Kv7.4 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Kv7.4 Antibody - Images

### Kv7.4 Antibody - 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.

### Kv7.4 Antibody - 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).