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Anti-Kv7.5 Antibody

Catalog # AP60906

Product Information

Application	WB, IHC
Primary Accession	Q9NR82
Reactivity	Human, Mouse, Mk
Host	Rabbit
Clonality	Polyclonal
Calculated MW	102179

Additional Information

Gene ID	56479
Other Names	Potassium voltage-gated channel subfamily KQT member 5; KQT-like 5; Potassium channel subunit alpha KvLQT5; Voltage-gated potassium channel subunit Kv7.5
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human Kv7.5. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500
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	KCNQ5 (HGNC:6299)
Function	Pore-forming subunit of the voltage-gated potassium (Kv) channel broadly expressed in brain and involved in the regulation of neuronal excitability (PubMed:10787416, PubMed:10816588, PubMed:11159685, PubMed:28669405). Associates with KCNQ3/Kv7.3 pore- forming subunit to form a potassium channel which contributes to M-type current, a slowly activating and deactivating potassium conductance which plays a critical role in determining the subthreshold electrical excitability of neurons (PubMed:10816588, PubMed:11159685). Contributes, with other potassium channels, to the molecular diversity of a heterogeneous population of M-channels, varying in kinetic and pharmacological properties, which underlie this physiologically important current (PubMed:10816588). Also forms a functional channel with KCNQ1/Kv7.1 subunit that may contribute to vasoconstriction and hypertension (PubMed:24855057). Channel may be selectively permeable in vitro to other cations besides potassium, in

decreasing order of affinity K(+) = Rb(+) > Cs(+) > Na(+) (PubMed:10816588). Similar to the native M-channel, KCNQ3-KCNQ5 potassium channel is suppressed by activation of the muscarinic acetylcholine receptor CHRM1 (PubMed:10816588).

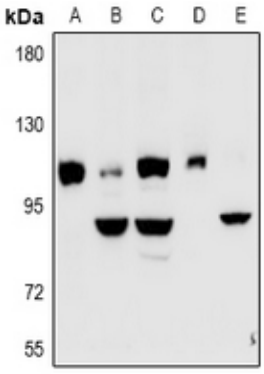
Cellular Location

Cell membrane; Multi-pass membrane protein

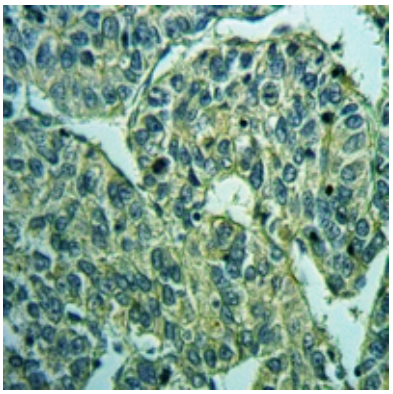
Tissue Location

Strongly expressed in brain and skeletal muscle (PubMed:10787416, PubMed:10816588). In brain, expressed in cerebral cortex, occipital pole, frontal lobe and temporal lobe. Lower levels in hippocampus and putamen. Low to undetectable levels in medulla, cerebellum and thalamus (PubMed:10787416, PubMed:10816588)

Images



Western blot analysis of Kv7.5 expression in HEK293T (A), COS7 (B), C6 (C), CT26 (D), MG63 (E) whole cell lysates. (Predicted band size: 102 kD; Observed band size: 102; 90 kD)



Immunohistochemical analysis of Kv7.5 staining in human liver cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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