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KCNJ10 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP17230c

Product Information

Application	WB, E
Primary Accession	P78508
Other Accession	P49655, Q9JM63, NP_002232.2
Reactivity	Human, Rat, Mouse
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB36974
Calculated MW	42508
Antigen Region	203-230

Additional Information

Gene ID	3766
Other Names	ATP-sensitive inward rectifier potassium channel 10, ATP-dependent inwardly rectifying potassium channel Kir41, Inward rectifier K(+) channel Kir12, Potassium channel, inwardly rectifying subfamily J member 10, KCNJ10
Target/Specificity	This KCNJ10 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 203-230 amino acids from the Central region of human KCNJ10.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	KCNJ10 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KCNJ10 (HGNC:6256)
Function	May be responsible for potassium buffering action of glial cells in the brain

(By similarity). Inward rectifier potassium channels are characterized by a greater tendency to allow potassium to flow into the cell rather than out of it (PubMed:8995301). Their voltage dependence is regulated by the concentration of extracellular potassium; as external potassium is raised, the voltage range of the channel opening shifts to more positive voltages (PubMed:8995301). The inward rectification is mainly due to the blockage of outward current by internal magnesium. Can be blocked by extracellular barium and cesium (PubMed:8995301). In the kidney, together with KCNJ16, mediates basolateral K(+) recycling in distal tubules; this process is critical for Na(+) reabsorption at the tubules (PubMed:24561201).

Cellular Location

Membrane; Multi- pass membrane protein. Basolateral cell membrane. Note=In kidney distal convoluted tubules, located in the basolateral membrane where it colocalizes with KCNJ16.

Tissue Location

Expressed in kidney (at protein level) (PubMed:24561201). In the nephron, expressed in the distal convoluted tubule, the connecting tubule, the collecting duct and cortical thick ascending limbs (PubMed:20651251).

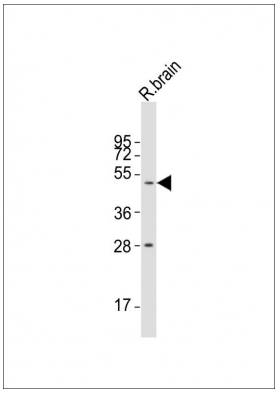
Background

This gene encodes a member of the inward rectifier-type potassium channel family, characterized by having a greater tendency to allow potassium to flow into, rather than out of, a cell. The encoded protein may form a heterodimer with another potassium channel protein and may be responsible for the potassium buffering action of glial cells in the brain. Mutations in this gene have been associated with seizure susceptibility of common idiopathic generalized epilepsy syndromes.

References

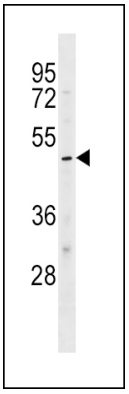
Jonard, L., et al. Int. J. Pediatr. Otorhinolaryngol. 74(9):1049-1053(2010)
Reichold, M., et al. Proc. Natl. Acad. Sci. U.S.A. 107(32):14490-14495(2010)
Heuser, K., et al. Epilepsy Res. 88(1):55-64(2010)
Pawelczyk, M., et al. Ann. Hum. Genet. 73 (PT 4), 411-421 (2009) :
Yang, T., et al. Am. J. Hum. Genet. 84(5):651-657(2009)

Images



Anti-KCNJ10 Antibody (Center)at 1:2000 dilution + rat brain lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 43 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

KCNJ10 Antibody (Center) (Cat. #AP17230c) western blot analysis in HL-60 cell line lysates (35ug/lane).This demonstrates the KCNJ10 antibody detected the KCNJ10 protein (arrow).



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