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AQP5 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12301b

Product Information

Application	WB, FC, E
Primary Accession	P55064
Other Accession	NP_001642.1
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB31077
Calculated MW	28292
Antigen Region	227-256

Additional Information

Gene ID	362
Other Names	Aquaporin-5, AQP-5, AQP5
Target/Specificity	This AQP5 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 227-256 amino acids from the C-terminal region of human AQP5.
Dilution	WB~~1:2000 FC~~1:25 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	AQP5 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	AQP5 (HGNC:638)
Function	Aquaporins form homotetrameric transmembrane channels, with each monomer independently mediating water transport across the plasma membrane along its osmotic gradient (PubMed:18768791, PubMed:8621489). Plays an important role in fluid secretion in salivary glands (By similarity).

	Required for TRPV4 activation by hypotonicity. Together with TRPV4, controls regulatory volume decrease in salivary epithelial cells (PubMed:16571723). Seems to play a redundant role in water transport in the eye, lung and in sweat glands (By similarity).
Cellular Location	Apical cell membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein. Cytoplasmic vesicle membrane; Multi-pass membrane protein Note=Hypotonicity increases location at the cell membrane Phosphorylation decreases location at the cell membrane
Tissue Location	Detected in skin eccrine sweat glands, at the apical cell membrane and at intercellular canaliculi (at protein level).

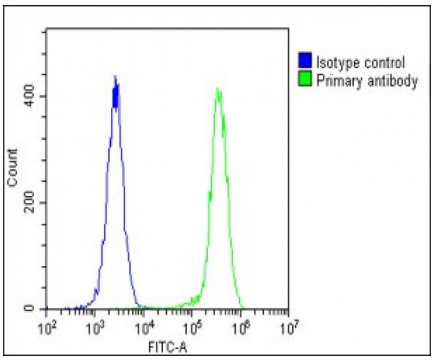
Background

Aquaporin 5 (AQP5) is a water channel protein. Aquaporins are a family of small integral membrane proteins related to the major intrinsic protein (MIP or AQP0). Aquaporin 5 plays a role in the generation of saliva, tears and pulmonary secretions. AQP0, AQP2, AQP5, and AQP6 are closely related and all map to 12q13.

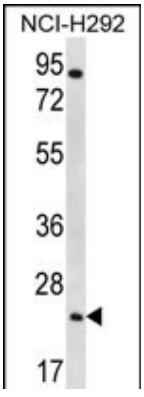
References

Shen, Y., et al. Respir Physiol Neurobiol 171(3):212-217(2010)
Shen, L., et al. Biomed. Pharmacother. 64(5):313-318(2010)
Shankardas, J., et al. Mol. Vis. 16, 1538-1548 (2010) :
Dimasi, D.P., et al. Mol. Vis. 16, 562-569 (2010) :
Nejsum, L.N., et al. Proc. Natl. Acad. Sci. U.S.A. 99(1):511-516(2002)

Images



Overlay histogram showing U-2 OS cells stained with AP12301b (green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP12301b, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(1583138) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



AQP5 Antibody (C-term) (Cat. #AP12301b) western blot analysis in NCI-H292 cell line lysates (35ug/lane).This demonstrates the AQP5 antibody detected the AQP5 protein (arrow).