

AQP7 Rabbit pAb

Catalog # AP97082

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	O14520
Other Accession	O14520
Reactivity	Human, Mouse
Predicted	Rat, Pig, Chicken, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	37232
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human AQP7
Epitope Specificity	251-342/342
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the MIP/aquaporin (TC 1.A.8) family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Water is a critical component of all living cells. Interestingly, tissue membranes show a great degree of water permeability. Mammalian red cells, renal proximal tubules, and descending thin limb of Henle are extraordinarily permeable to water. Water crosses hydrophobic plasma membranes either by simple diffusion or through a facilitative transport mechanism mediated by special protein "aquaporin". Over the last decade, genes for several members of aquaporin family have been cloned, expressed, and their distribution studied in many tissues. AQP0 or MIP26 (major intrinsic protein 26kD), and Aquaporin 1 (AQP1, purified from red cells) also called CHIP28 (channel forming integral protein, 28kD; 268aa; gene locus 7p14) has been the foundation of the growing family of aquaporin. The lens specific AQP0 represents up to 80% of total lens membrane protein. Defects in MIP26 are cause of autosomal dominant cataract. The cataract Fraser mutation (CATFR or Shriveled) is a transposon induced splicing error that substitutes a long terminal repeat sequence for the C terminus of MIP. The lens opacity mutation (LOP) is an amino acid substitution that inhibits targeting of MIP to the cell membrane.

Additional Information

Gene ID	364
Other Names	AQP7L; AQPap; GLYCQTL; AQP-7; AQP7_HUMAN; AQP7; Aquaglyceroporin-7; Aquaporin adipose (AQPap); Aquaporin-7-like; AQP9; AQP7_MOUSE; AQP7_RAT; aquaporin 7

Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=2ug /test
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	AQP7 (HGNC:640)
Function	Aquaglyceroporins form homotetrameric transmembrane channels, with each monomer independently mediating glycerol and water transport across the plasma membrane along their osmotic gradient (PubMed: 11952783 , PubMed: 30420639 , PubMed: 30423801 , PubMed: 36737436 , PubMed: 9405233). Could also be permeable to urea (PubMed: 9405233). Mediates the efflux of glycerol, formed upon triglyceride hydrolysis, to avoid its accumulation in adipocytes and to make it available to other tissues. In the kidney, mediates the reabsorption of glycerol, preventing its loss in urine, again participating to energy homeostasis. In pancreatic beta cells, it also mediates the efflux of glycerol, regulating its intracellular levels (By similarity).
Cellular Location	Cell membrane; Multi-pass membrane protein. Cytoplasmic vesicle membrane; Multi-pass membrane protein. Lipid droplet. Note=Internalized from the cell membrane in response to catecholamine-induced activation of PKA; detected on intracellular membranes and colocalizes with lipid droplets (By similarity). Colocalizes with PLIN1 in adipocytes, probably on lipid droplets (PubMed:27832861). {ECO:0000250 UniProtKB:O54794, ECO:0000269 PubMed:27832861}
Tissue Location	Detected in the sperm head (at protein level) (PubMed:28042826). Detected in white adipose tissue (PubMed:9405233)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.