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AQP3 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19289c

Product Information

Application	WB, E
Primary Accession	Q92482
Other Accession	P47862, Q8R2N1, Q08DE6, NP_004916.1
Reactivity	Human, Rat, Mouse
Predicted	Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB39489
Calculated MW	31544
Antigen Region	163-191

Additional Information

Gene ID	360
Other Names	Aquaporin-3, AQP-3, Aquaglyceroporin-3, AQP3
Target/Specificity	This AQP3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 163-191 amino acids from the Central region of human AQP3.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	AQP3 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	AQP3 {ECO:0000303|PubMed:7558005, ECO:0000312|HGNC:HGNC:636}
Function	Aquaglyceroporins form homotetrameric transmembrane channels, with each monomer independently mediating glycerol and water transport across the plasma membrane along their osmotic gradient (PubMed:12239222,

PubMed:30420639). Could also be permeable to urea (By similarity). Also participates in cell permeability to H2O2 and H2O2- mediated signaling (PubMed:20724658). In skin, transports glycerol to the epidermis and stratum corneum, where it maintains hydration, elasticity, and supports lipid biosynthesis for barrier repair (By similarity). In kidney, contributes to the reabsorption of water, helping the body maintain proper fluid balance (By similarity).

Cellular Location

Cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:O14520}. Basolateral cell membrane {ECO:0000250|UniProtKB:P47862}; Multi-pass membrane protein {ECO:0000250|UniProtKB:O14520}

Tissue Location

Widely expressed in epithelial cells of kidney (collecting ducts) and airways, in keratinocytes, immature dendritic cells and erythrocytes. Isoform 2 is not detectable in erythrocytes at the protein level

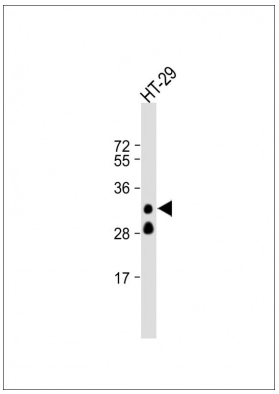
Background

Aquaporin 3 is a water channel protein. Aquaporins are a family of small integral membrane proteins related to the major intrinsic protein (MIP or AQP0). Aquaporin 3 is localized at the basal lateral membranes of collecting duct cells in the kidney. In addition to its water channel function, aquaporin 3 has been found to facilitate the transport of nonionic small solutes such as urea and glycerol, but to a smaller degree. It has been suggested that water channels can be functionally heterogeneous and possess water and solute permeation mechanisms.

References

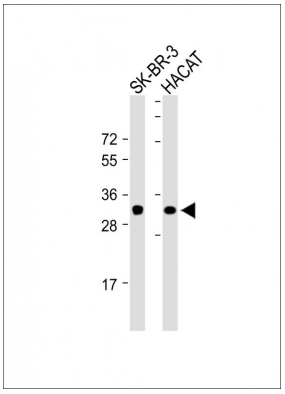
Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Kim, N.H., et al. J. Invest. Dermatol. 130(9):2231-2239(2010)
Ji, C., et al. Int. J. Mol. Med. 26(2):257-263(2010)
Melis, M., et al. Dis. Colon Rectum 53(6):936-943(2010)
Shen, L., et al. Biomed. Pharmacother. 64(5):313-318(2010)

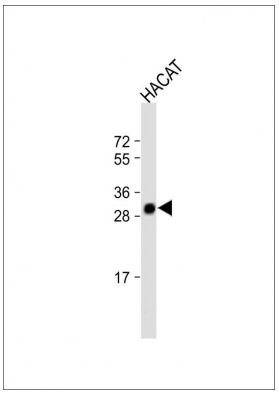
Images



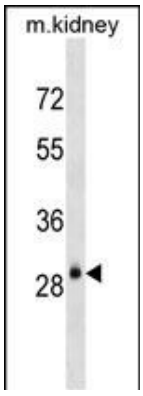
All lanes : Anti-AQP3 Antibody (Center) at 1:500 dilution Lane 1: HT-29 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size : 33kDa Blocking/Dilution buffer: 5% NFDM/TBST.

All lanes : Anti-AQP3 Antibody (Center) at 1:2000 dilution Lane 1: SK-BR-3 whole cell lysate Lane 2: HACAT whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size : 32kDa Blocking/Dilution buffer: 5% NFDM/TBST.

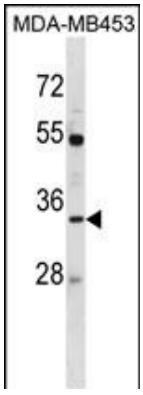




All lanes : Anti-AQP3 Antibody (Center) at 1:1000 dilution Lane 1: HACAT whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size : 31kDa Blocking/Dilution buffer: 5% NFDM/TBST.



AQP3 Antibody (Center)(Cat. #AP19289c) western blot analysis in mouse kidney tissue lysates (35ug/lane).This demonstrates the AQP3 antibody detected the AQP3 protein (arrow).



AQP3 Antibody (Center) (Cat. #AP19289c) western blot analysis in MDA-MB453 cell line lysates (35ug/lane).This demonstrates the AQP3 antibody detected the AQP3 protein (arrow).

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