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Anti-Aquaporin 3 Picoband Antibody

Catalog # ABO10233

Product Information

Application	WB
Primary Accession	Q8R2N1
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Aquaporin-3(Aqp3) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	11828
Other Names	Aquaporin-3, AQP-3, Aquaglyceroporin-3, Aqp3
Calculated MW	31568
Application Details	Western blot, 0.1-0.5 □g/ml, Mouse, Rat, Human
Subcellular Localization	Membrane; Multi-pass membrane protein.
Tissue Specificity	Renal medulla and colon. Predominantly in the inner medulla. Expressed in basal layer of epidermal keratinocytes.
Source	Eukaryota
Protein Name	Aquaporin-3
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of mouse Aquaporin 3 (122-137aa LYYDAIWAFANNELFV), different from the related human sequence by three amino acids, and from the related rat sequence by two amino acids.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated

freezing and thawing.

Protein Information

Name	Aqp3 {ECO:0000303|PubMed:12771381, ECO:0000312|MGI:MGI:1333777}
Function	Aquaglyceroporins form homotetrameric transmembrane channels, with each monomer independently mediating glycerol and water transport across the plasma membrane along their osmotic gradient (PubMed:11880378, PubMed:12771381, PubMed:17429015, PubMed:19468303). Could also be permeable to urea (By similarity). Also participates in cell permeability to H2O2 and H2O2-mediated signaling (By similarity). In skin, transports glycerol to the epidermis and stratum corneum, where it maintains hydration, elasticity, and supports lipid biosynthesis for barrier repair (PubMed:11880378, PubMed:12771381). In kidney, contributes to the reabsorption of water, helping the body maintain proper fluid balance (PubMed:10737773).
Cellular Location	Cell membrane {ECO:0000250|UniProtKB:Q92482}; Multi-pass membrane protein {ECO:0000250|UniProtKB:O14520}. Basolateral cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:O14520}
Tissue Location	Detected in principal cells in collecting ducts in kidney medulla (at protein level) (PubMed:16641094). Renal medulla and colon. Predominantly in the inner medulla. Expressed in basal layer of epidermal keratinocytes.

Background

This gene encodes the water channel protein aquaporin 3. Aquaporins are a family of small integral membrane proteins related to the major intrinsic protein, also known as aquaporin 0. 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. Alternative splicing of this gene results in multiple transcript variants encoding different isoforms.

Images

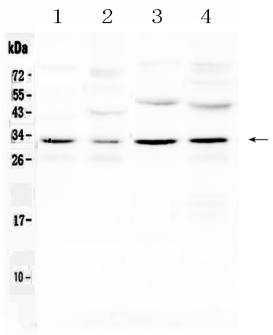


Figure 1. Western blot analysis of Aquaporin 3 using anti-Aquaporin 3 antibody (ABO10233). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: mouse kidney tissue lysates, Lane 2: mouse brain tissue lysates, Lane 3: rat kidney tissue lysates, Lane 4: rat brain tissue lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti- Aquaporin 3 antigen affinity purified polyclonal antibody (Catalog # ABO10233) at 0.5 □¼g/mL overnight at 4 □°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced

Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for Aquaporin 3 at approximately 32KD. The expected band size for Aquaporin 3 is at 32KD.

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