bs-2506R **[Primary Antibody]**

AQP7 Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 364 **SWISS:** O14520

Target: AQP7

Immunogen: KLH conjugated synthetic peptide derived from human AQP7: 251-342/342. < Cytoplasmic >

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: 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.

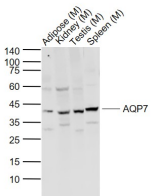
Applications: **WB** (1:500-2000)
IHC-P (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)
Flow-Cyt (2ug/test)

Reactivity: Human, Mouse (predicted: Rat, Pig, Cow, Chicken, Dog)

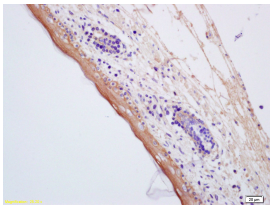
Predicted MW.: 37 kDa

Subcellular Location: Cell membrane

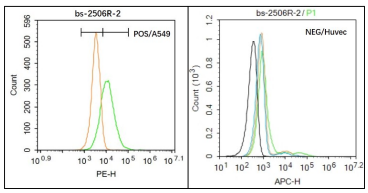
VALIDATION IMAGES



Sample: Lane 1: Adipose (Mouse) Lysate at 40 ug Lane 2: Kidney (Mouse) Lysate at 40 ug Lane 3: Testis (Mouse) Lysate at 40 ug Lane 4: Spleen (Mouse) Lysate at 40 ug Primary: Anti-AQP7 (bs-2506R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 37/18 kD Observed band size: 40 kD

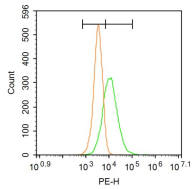


Tissue/cell:Mouse embryos; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min; Incubation: Anti-AQP7 Polyclonal Antibody, Unconjugated(bs-2506R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Black line : Positive blank control (A549); Negative blank control (HUVEC） Green line : Primary Antibody (Rabbit Anti-AQP7 antibody (bs-2506R)) Orange line：Isotype Control Antibody (Rabbit IgG) . Blue line : Secondary Antibody (Goat anti-rabbit IgG-AF488) A549 （Positive） and HUVEC（Negative control） cells (black) were incubated in 5% BSA blocking buffer for 30 min at room temperature. Cells were then stained with AQP7 Antibody(bs-2506R)at 1:50 dilution in blocking buffer and incubated for 30 min at room temperature, washed twice with 2% BSA in PBS, followed by secondary antibody(blue) incubation for 40 min at room temperature. Acquisitions of 20,000 events were performed. Cells stained with primary antibody (green), and

isotype control (orange).



Blank control: A549. Primary Antibody (green line): Rabbit Anti-AQP7 antibody (bs-2506R) Dilution: 3μg /10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody : Goat anti-rabbit IgG-PE Dilution: 3μg /test. Protocol The cells were incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.

SELECTED CITATIONS

- **[IF=6.4]** Khattab Basma Adel. et al. Impact of intermittent fasting versus vitamin D on high fat fructose-induced pancreatic steatosis: possible role of aquaporins. MOL MED. 2025 Dec;31(1):1-16 IHC ;Rat. 40419958
- **[IF=5.195]** Mei-Mei Zhang. et al. Time-dependent laxative effect of sennoside A, the core functional component of rhubarb, is attributed to gut microbiota and aquaporins. J ETHNOPHARMACOL. 2023 Jul;311:116431 WB ;Mouse. 37003403
- **[IF=4.8]** Ma Yijun. et al. Aquaporin-7 Facilitates Proliferation and Adipogenic Differentiation of Mouse Bone Marrow Mesenchymal Stem Cells by Regulating Hydrogen Peroxide Transport. Stem Cell Reviews and Reports. 2023 Jul;:1-13 WB ;Mouse. 37432580
- **[IF=4.3]** Jieru Wang. et al. Comparative analysis of AQP7 expression and cryotolerance in X- and Y-chromosome bearing bovine sperm. FRONT CELL DEV BIOL. 2025 May;13: WB ;Bull. 40454315
- **[IF=2.7]** Maren E. Buenning. et al. Short-Time Alternating Current Electrical Stimulation and Cell Membrane-Related Components. APPL SCI-BASEL. 2024 Jan;14(2):812 IF ;Human. 10.3390/app14020812