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Anti-Aquaporin 2 (Ser269) Antibody

Our Anti-Aquaporin 2 (Ser269) rabbit polyclonal phosphospecific primary antibody from PhosphoSolutio
Catalog # AN1314

Product Information

Application	WB, IHC, ICC, IP
Primary Accession	P34080
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	28931

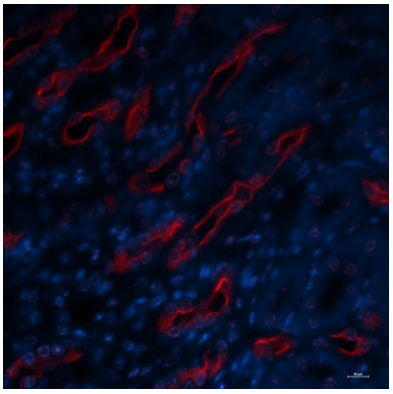
Additional Information

Gene ID	25386
Other Names	ADH water channel antibody, AQP 2 antibody, AQP CD antibody, AQP-2 antibody, AQP-CD antibody, AQP2 antibody, AQP2_HUMAN antibody, AQPCD antibody, Aquaporin 2 collecting duct antibody, Aquaporin CD antibody, Aquaporin-2 antibody, Aquaporin-CD antibody, Aquaporin2 antibody, Aquaporine 2 antibody, Collecting duct water channel protein antibody, MGC34501 antibody, Water channel aquaporin 2 antibody, Water channel protein for renal collecting duct antibody, WCH CD antibody, WCH-CD antibody, WCHCD antibody
Target/Specificity	Aquaporin 2 (AQP2) is a hormonally regulated water channel located in the renal collecting duct. Mutations in the AQP2 gene cause hereditary nephrogenic diabetes insipidus in humans (Iolascon et al., 2007). A vasopressin induced cAMP increase results in the phosphorylation of AQP2 at serine-256 and its translocation from the intracellular vesicles to the apical membrane of principal cells (van Balkom et al., 2002). Serine-269 has been recently identified as a vasopressin-mediated phosphorylation site on AQP2 and as such has shown to potentiate plasma membrane retention of AQP2 (Hoffert JD et al., 2008).
Dilution	WB~~1:1000 IHC~~1:100~500 ICC~~N/A IP~~N/A
Format	Antigen Affinity Purified from Pooled Serum
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Anti-Aquaporin 2 (Ser269) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.
Shipping	Blue Ice

Background

Aquaporin 2 (AQP2) is a hormonally regulated water channel located in the renal collecting duct. Mutations in the AQP2 gene cause hereditary nephrogenic diabetes insipidus in humans (Iolascon et al., 2007). A vasopressin induced cAMP increase results in the phosphorylation of AQP2 at serine-256 and its translocation from the intracellular vesicles to the apical membrane of principal cells (van Balkom et al., 2002). Serine-269 has been recently identified as a vasopressin-mediated phosphorylation site on AQP2 and as such has shown to potentiate plasma membrane retention of AQP2 (Hoffert JD et al., 2008).

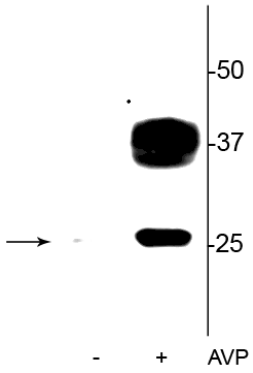
Images



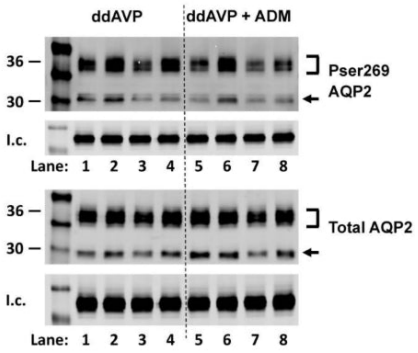
Immunolabeling of vasopressin treated mouse kidney (inner medulla) showing specific labeling of the AQP2 protein phosphorylated at Ser269 (Cat. No. AN1314, red, 1:1000). Nuclei labeled with DAPI. Magnification 10x. Image kindly provided by Juan Pablo Arroyo Ornelas, Vanderbilt University.

Image not found : 202310/p112-269-Mouse-Inner-Medulla-Kidney-JP-Arroyo-1100x375_a0cb6c81-c148-4fc3-b5b1-1628c5c7ba40_1

Immunolabeling of vasopressin treated mouse kidney (inner medulla) showing specific labeling of the AQP2 protein phosphorylated at Ser269 (Cat. No. AN1314, red, 1:1000) and total AQP2 (green). Nuclei labeled with DAPI. Magnification 600x. Image kindly provided by Juan Pablo Arroyo Ornelas, Vanderbilt University.



Western blot of rat kidney lysate showing specific immunolabeling of the ~29 kDa and 37 kDa glycosylated form of the AQP2 protein phosphorylated at Ser269 in the vasopressin (AVP) treated lane (+), but not in the control lane (-).



Western analysis of rat kidney inner medullary (IM) lysate from ddAVP and ddAVP + ADM-treated IM probed for total (bottom) and pSer269 (cat. AN1314, 1:1000)(top) AQP2. Brackets indicate the glycosylated AQP2 protein between 35 and 45 kDa, and the arrow indicates the un glycosylated AQP2 protein at 29 kDa. The matched pair comparisons were achieved by comparing Lane 1 with Lane 5; Lane 2 with Lane 6; Lane 3 with Lane 7; and Lane 4 with Lane 8. Image from publication CC-BY-4.0. PMID: 37047509