

Anti-Aquaporin 2 (Ser269) Antibody

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

Specification

Anti-Aquaporin 2 (Ser269) Antibody - Product Information

Application	WB, IHC, IF
Primary Accession	<u>P34080</u>
Reactivity	Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	lgG
Calculated MW	28931

Anti-Aquaporin 2 (Ser269) Antibody - 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 (lolascon 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 IF~~1:50~200

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

Anti-Aquaporin 2 (Ser269) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

Anti-Aquaporin 2 (Ser269) Antibody - Images



Immunolabeling of vasopressin treated mouse kidney (inner medulla) showing specific labeling of the AQP2 protein phosphorylated at Ser269 (Cat. No. p112-269, red, 1:1000). Nuclei labeled with DAPI. Magnification 10x. Image kindly provided by Juan Pablo Arroyo Ornelas, Vanderbilt University.



Immunolabeling of vasopressin treated mouse kidney (inner medulla) showing specific labeling of the AQP2 protein phosphorylated at Ser269 (Cat. No. p112-269, 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. p112-269, 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

Anti-Aquaporin 2 (Ser269) Antibody - 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 (lolascon 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).