

### Phospho-Ser269 Aquaporin 2 Antibody

Affinity purified rabbit polyclonal antibody Catalog # AN1193

### Specification

# Phospho-Ser269 Aquaporin 2 Antibody - Product Information

Application Primary Accession Reactivity Predicted Host Clonality Calculated MW WB <u>P34080</u> Rat Bovine, Mouse Rabbit polyclonal 29/37 KDa

## Phospho-Ser269 Aquaporin 2 Antibody - Additional Information

Gene ID25386Gene NameAQP2Other NamesAquaporin-2, AQP-2, ADH water channel, Aquaporin-CD, AQP-CD, Collecting duct water channelprotein, WCH-CD, Water channel protein for renal collecting duct, Aqp2

Target/Specificity

Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser269 conjugated to KLH.

**Dilution** WB~~ 1:1000

Format

Prepared from rabbit serum by affinity purification via sequential chromatography on phosphoand dephosphopeptide affinity columns.

#### **Antibody Specificity**

Specific for the ~29k AQP2 protein phosphorylated at Ser269. Also recognizes the glycosylated form of AQP2 at ~ 37k. Immunolabeling of the AQP2 band is blocked by preadsorption with the phospho-peptide used as antigen but not by the corresponding dephospho-peptide.

#### 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

Phospho-Ser269 Aquaporin 2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping Blue Ice



# Phospho-Ser269 Aquaporin 2 Antibody - Protocols

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

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

## Phospho-Ser269 Aquaporin 2 Antibody - Images



Western blot of vasopressin (AVP) treated rat kidney lysate showing specific immunolabeling of the  $\sim$  29k and 37k glycosylated form of the AQP2 protein phosphorylated at Ser269.

# Phospho-Ser269 Aquaporin 2 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 (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).

# Phospho-Ser269 Aquaporin 2 Antibody - References

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Ford P, Rivarola V, Chara O, Blot-Chabaud M, Cluzeaud F, Farman M, Parisi M, Capurro C (2005) Volume regulation in cortical collecting duct cells: role of AQP2. Biol Cell 97(9):687-97. Hoffert JD, Nielsen J,, Yu MJ,, Pisitikun T,Schleicher SM,, Nielsen Knepper MA (2007) Dynamics of aquaporin-2 serine-261 phosphorylation in response to short-term vasopressin treatment in collecting duct. Am J Physiol Renal Physiol 292: F691-F700.

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Gesulado L, Debler EW, Suelto M, Valenti G (2007) Characterization of two novel missense mutations in AQP2 gene causing nephrogenic diabetes insipidus. Nephron Physiol. 105(3): p33-41. Hoffert JD, Fenton RA, Moeller HB, Simons B, Tchapyjnikov D, McDill BW, Yu MJ, Pisitkun T, Chen F, Knepper MA. (2008) Vasopressin-stimulated increase in phosphorylation at serine 269 potentiates plasma membrane retention of aquaporin 2. J Biol Chem. 2008 Sep 5; 283(36):24617-27.