Datasheet for ABIN361469

anti-AQP2 antibody (pSer261)

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Overview

Quantity:	100 µL
Target:	AQP2
Binding Specificity:	pSer261
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This AQP2 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC)

Product Details

Immunogen:	Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser261 conjugated to KLH
Specificity:	Specific for ~29k AQP2 protein phosphorylated at Ser261. 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.
Cross-Reactivity:	Mouse (Murine), Rat (Rattus)
Predicted Reactivity:	bovine, canine, chicken, human, non-human primate
Purification:	Antigen Affinity Purified from Pooled Serum

Target Details

Target:	AQP2

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Target Details

Alternative Name:	AQP2 (AQP2 Products)
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). Recently, serine-261 has been identified as a novel phosphorylation site on AQP2 and levels of phosphorylated S261 have been shown to decrease with vasopressin treatment suggesting its involvement in vasopressin-dependent AQP2 trafficking (Hoffert et al., 2007). Anti-Phospho-Ser261 Aquaporin 2 Western blot of rat kidney lysate showing specific immunolabeling of the ~ 29k and 37k glycosylated form of the AQP2 protein phosphorylated at Ser261. Immunolabeling is blocked by the phospho-peptide used as antigen (peptide) but not by the corresponding dephospho-peptide (not shown).
Molecular Weight:	29/37 kDa
Gene ID:	25386
UniProt:	P34080
Pathways:	Response to Water Deprivation

Application Details

Application Notes:	Recommended Dilution: WB: 1:1000 Quality Control: Western blots performed on each lot.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	100 µL in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50 % glycerol.
Storage:	-20 °C

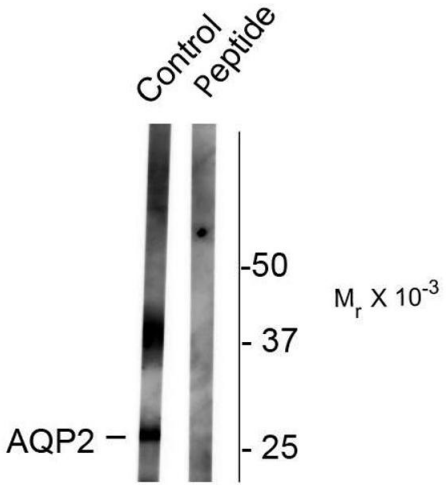
Publications

Product cited in:	Hoffert, Fenton, Moeller, Simons, Tchapyjnikov, McDill, Yu, Pisitkun, Chen, Knepper: " Vasopressin-stimulated increase in phosphorylation at Ser269 potentiates plasma membrane retention of aquaporin-2." in: **The Journal of biological chemistry**, Vol. 283, Issue 36, pp. 24617-27, (2008) (PubMed).

Publications

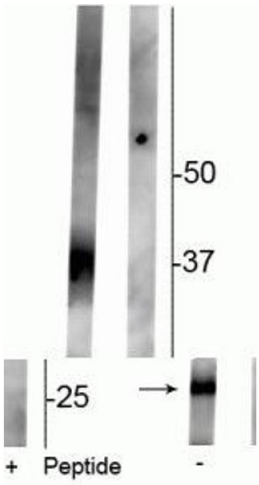
Hoffert, Nielsen, Yu, Pisitkun, Schleicher, Nielsen, Knepper: "Dynamics of aquaporin-2 serine-261 phosphorylation in response to short-term vasopressin treatment in collecting duct." in: **American journal of physiology. Renal physiology**, Vol. 292, Issue 2, pp. F691-700, (2007) (PubMed).

Images



Western Blotting

Image 1. Western blots of rat kidney lysate showing specific immunolabeling of the ~ 29k and 37k glycosylated form of the AQP2 protein phosphorylated at Ser261. Immunolabeling is blocked by the phospho-peptide used as antigen (peptide) but not by the corresponding dephospho-peptide (not shown).



Western Blotting

Image 2. Western blot of rat kidney lysate showing specific immunolabeling of the ~29 kDa and 37 kDa glycosylated form of the AQP2 protein phosphorylated at Ser261 in the first lane (-). Phosphospecificity is shown in the second lane (+) where the immunolabeling is blocked by the phosphopeptide used as antigen but not by the corresponding non-phosphopeptide (not shown).