

Rabbit anti-Rat Aquaporin 2 (Ser261) Polyclonal Antibody | anti-AQP2 antibody

Anti-Phospho-Ser261 Aquaporin 2

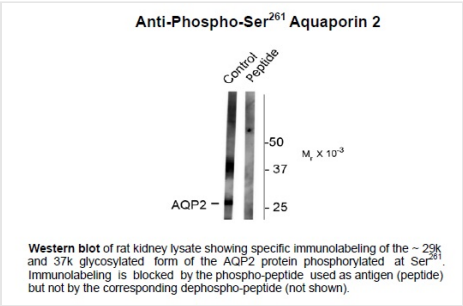
CATALOG # AAA72781	HOST Rabbit	REACTIVITY Rat	APPLICATIONS Immunohistochemistry, Western Blot
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PRODUCT SYNONYMS

Aquaporin 2 (Ser261); Polyclonal Antibody; Anti-Phospho-Ser261 Aquaporin 2; anti-AQP2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Rat
Clonality	Polyclonal
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.
Purity/Purification	Affinity Purified (Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.)
Form/Format	100 ul in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 ug per ml BSA and 50% glycerol. Adequate amount of material to conduct 10-mini Western Blots.
Sequence Length	271
Applicable Applications for anti-AQP2 antibody	IHC (Immunohistochemistry), WB (Western Blot)
Antigen	Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser261 of rat aquaporin 2.
Immunogen Information	Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser261 conjugated to KLH
Immunogen Species	Rat
Reactivity Assumed Based on 100% Sequence Homology	Canine and bovine, chicken, human, mouse, non-human primate
Species Reactivity Note	The antibody has been directly tested for reactivity in Western blots with rat tissue. It is anticipated that the antibody will react with canine, bovine, chicken, human, mouse and non-human primate tissues based on the fact that these species have 100% homology with the amino acid sequence used as antigen.
Biological Significance	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).
Preparation and Storage	Store at -20 degree C; stable for at least one year.



Application Data

ADDITIONAL INFORMATION

Related Product Information for anti-AQP2 antibody	Affinity purified rabbit polyclonal antibody
References	• van Balkom BW, Savelkoul PJ, Markovich D, Hofman E, Nielsen S, van der Sluijs P, Deen PM (2002) The role of putative phosphorylation sites in the targeting and shuttling of the aquaporin 2 water channel. J Biol Chem 277(44):41473-9. • 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.. • Iolascon A, Aglio V, Tamma G, D'Appolito M, Addabbo F, Procino G, Simonetti MC, Montini G, 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

NCBI AND UNIPROT INFORMATION

NCBI GI #	77539434
NCBI GeneID	25386
NCBI Accession #	NP_037041.2
NCBI GenBank Nucleotide #	NM_012909.2
UniProt Accession #	P34080; A1A5L4
Molecular Weight	29/37
NCBI Official Full Name	aquaporin-2
NCBI Official Synonym Full Names	aquaporin 2 (collecting duct)
NCBI Official Symbol	Aqp2
NCBI Official Synonym Symbols	AQP-2; aquaporin-2
NCBI Protein Information	aquaporin-2; AQP-CD; WCH-CD; aquaporin-CD; ADH water channel; collecting duct water channel protein; water channel protein for renal collecting duct
UniProt Protein Name	Aquaporin-2
UniProt Gene Name	Aqp2
UniProt Synonym Gene Names	AQP-2; AQP-CD

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/aquaporin-2-ser261-antibody-immunohistochemistry-western-blot-elisa/72781>