

Product datasheet

Anti-Aquaporin 2 (phospho S261) antibody ab110418

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Overview

Product name	Anti-Aquaporin 2 (phospho S261) antibody
Description	Rabbit polyclonal to Aquaporin 2 (phospho S261)
Host species	Rabbit
Tested applications	Suitable for: WB, ELISA, IHC-P
Species reactivity	Reacts with: Rat Predicted to work with: Mouse, Sheep, Cow, Human, Pig, Chimpanzee, Macaque monkey, Gorilla, Orangutan 
Immunogen	Synthetic peptide conjugated to KLH derived from within residues 250 to the C-terminus of Rat Aquaporin 2, phosphorylated at S261. Read Abcam's proprietary immunogen policy
Positive control	This antibody gave a positive signal in WB within Rat Kidney tissue lysate as well as giving a positive result in IHC in the following FFPE tissue: Rat normal kidney.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS Note: Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab110418** in the following tested applications.

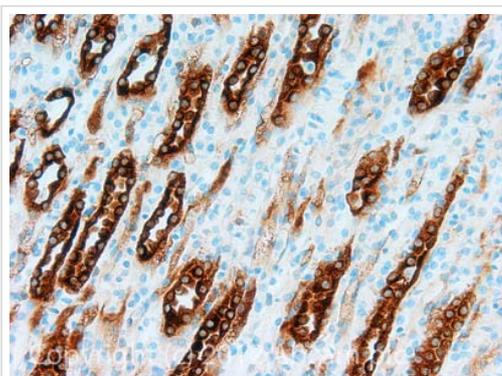
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 37 kDa (predicted molecular weight: 29 kDa).
ELISA		Use at an assay dependent concentration.
IHC-P	★★★★☆	Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Target

Function	Forms a water-specific channel that provides the plasma membranes of renal collecting duct with high permeability to water, thereby permitting water to move in the direction of an osmotic gradient.
Tissue specificity	Expressed in renal collecting tubules.
Involvement in disease	Diabetes insipidus, nephrogenic, autosomal
Sequence similarities	Belongs to the MIP/aquaporin (TC 1.A.8) family.
Domain	Aquaporins contain two tandem repeats each containing three membrane-spanning domains and a pore-forming loop with the signature motif Asn-Pro-Ala (NPA).
Post-translational modifications	Ser-256 phosphorylation is necessary and sufficient for expression at the apical membrane. Endocytosis is not phosphorylation-dependent.
Cellular localization	Apical cell membrane. Basolateral cell membrane. Cytoplasmic vesicle membrane. Golgi apparatus, trans-Golgi network membrane. Shuttles from vesicles to the apical membrane. Vasopressin-regulated phosphorylation is required for translocation to the apical cell membrane. PLEKHA8/FAPP2 is required to transport AQP2 from the TGN to sites where AQP2 is phosphorylated.

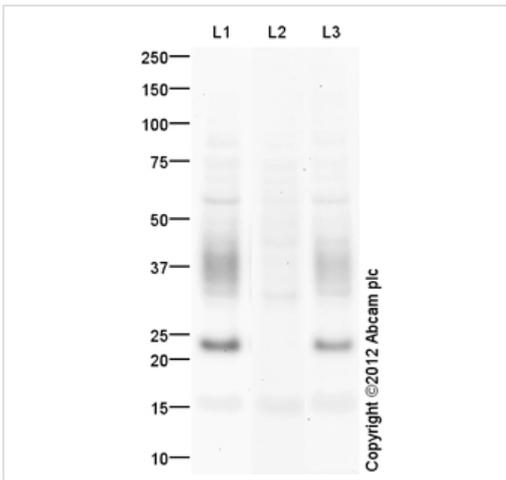
Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aquaporin 2 (phospho S261) antibody (ab110418)

IHC image of Aquaporin 2 (phospho S261) staining in Rat normal kidney formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab110418, 1 µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



Western blot - Anti-Aquaporin 2 (phospho S261) antibody (ab110418)

Anti-Aquaporin 2 (phospho S261) antibody (ab110418) at 1 µg/ml + Kidney (Rat) Tissue Lysate at 20 µg

Secondary

Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 29 kDa

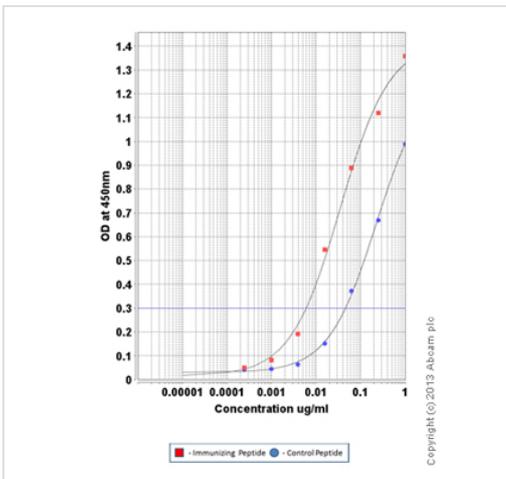
Observed band size: 37 kDa

[why is the actual band size different from the predicted?](#)

Additional bands at: 23 kDa, 57 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 16 minutes

Aquaporin 2 contains a potential glycosylation site (SwissProt) which may explain its migration at a higher molecular weight than predicted. The predicted molecular weight of Aquaporin 2 is 29 kDa (SwissProt), however we expect to observe a banding pattern around 37 kDa. Abcam welcomes customer feedback and would appreciate any comments regarding this product and the data presented above.



ELISA - Anti-Aquaporin 2 (phospho S261) antibody (ab110418)

ab110418 was tested using an Indirect ELISA approach. The wells were coated with peptide (1 µg/ml at 100 µl/well) overnight at 4°C, followed by a 5% BSA blocking step for 1 hour at room temperature. The primary Ab was then added at a dilution range of 1- 0.00025 µg/ml (100 µl/well) for 1 hr at room temperature. A HRP-conjugated anti-rabbit IgG (heavy and light chain) was used as a secondary antibody at 1:20,000 dilution for 1 hr at room temperature.

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