


Product datasheet

Anti-Aquaporin 4 antibody ab46182

★★★★☆ 19 Abreviews 19 References 4 Images

Overview

Product name	Anti-Aquaporin 4 antibody
Description	Rabbit polyclonal to Aquaporin 4
Host species	Rabbit
Specificity	ab46182 is not suitable for staining Aquaporin 4 in IHC using paraffin embedded sections but some customers have successfully used the antibody in frozen sections (see submitted Abreviews). Please contact Scientific Support if you need further help.
Tested applications	Suitable for: WB, ICC/IF, IHC-FrFI, ICC
Species reactivity	Reacts with: Mouse, Rat, Human, Pig Predicted to work with: Sheep, Chicken, Cow 
Immunogen	Synthetic peptide conjugated to KLH derived from within residues 50 - 150 of Human Aquaporin 4. Read Abcam's proprietary immunogen policy (Peptide available as ab46181 .)
Positive control	This antibody gave a positive signal in the following Tissue Lysates: Brain (Human), Heart (Human) and Brain (Rat).

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	Preservative: 0.02% Sodium Azide Constituents: 1% BSA, PBS, pH 7.4
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab46182** in the following tested applications.

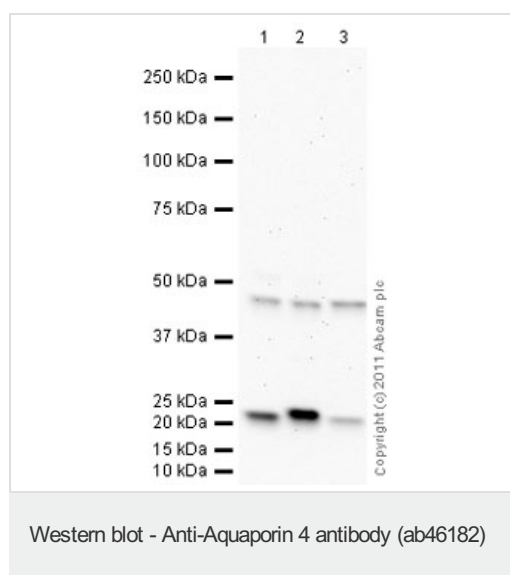
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★☆	Use a concentration of 1 µg/ml. Detects a band of approximately 48 kDa (predicted molecular weight: 35 kDa). Can be blocked with Human Aquaporin 4 peptide (ab46181) . Abcam recommends using milk as the blocking agent.
ICC/IF	★★★★☆	Use at an assay dependent concentration.
IHC-FrFI	★★★★☆	Use at an assay dependent concentration.
ICC	★★★★☆	Use at an assay dependent concentration.

Target

Function	Forms a water-specific channel. Osmoreceptor which regulates body water balance and mediates water flow within the central nervous system.
Tissue specificity	Brain - muscle >> heart, kidney, lung, and trachea.
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	Phosphorylation by PKC at Ser-180 reduces conductance by 50%. Phosphorylation by PKG at Ser-111 in response to glutamats increases conductance by 40%.
Cellular localization	Membrane.

Images



All lanes : Anti-Aquaporin 4 antibody (ab46182) at 1 µg/ml (blocked with 3% milk)

Lane 1 : Human brain tissue lysate - total protein ([ab29466](#))

Lane 2 : Brain (Rat) Tissue Lysate

Lane 3 : Human heart tissue lysate - total protein ([ab29431](#))

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) preadsorbed ([ab97080](#)) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

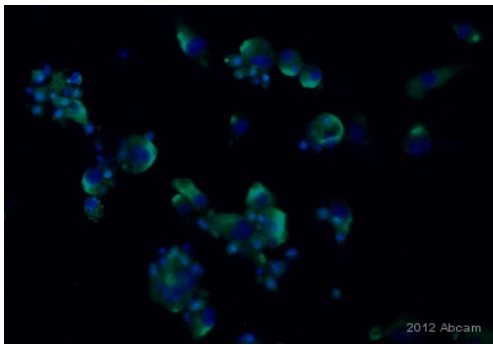
Predicted band size: 35 kDa

Observed band size: 48 kDa

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

Additional bands at: 22 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 12 minutes

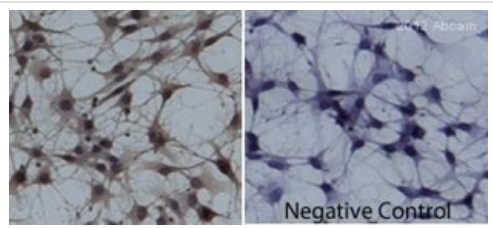


Immunocytochemistry/ Immunofluorescence - Anti-Aquaporin 4 antibody (ab46182)

This image is courtesy of an anonymous Abreview

ab46182 staining Aquaporin 4 in mouse RAW 264.7 cells by Immunocytochemistry/ Immunofluorescence.

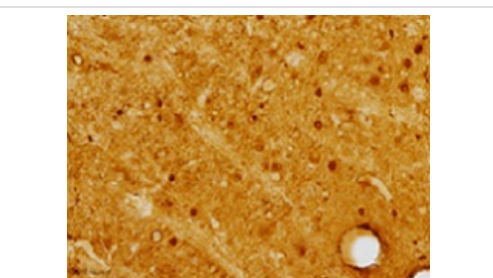
Cells were fixed with paraformaldehyde and blocked with 10% serum for 20 minutes at 24°C. Samples were incubated with primary antibody (1/100 in PBS) for 16 hours at 4°C. An Alexa Fluor® 488-conjugated goat anti-rabbit polyclonal (1/1000) was used as the secondary antibody.



Immunocytochemistry - Anti-Aquaporin 4 antibody (ab46182)

This image is courtesy of an anonymous Abreview.

Immunocytochemical analysis of 33B cells originating from Rat nervous tissue oligodendrogloma, labelling AQP4 with ab46182 diluted 1/100. Cells were PFA fixed. Hematoxyling used to counterstained. Negative control given were ab46182 was not included.



Immunohistochemistry free floating - Anti-Aquaporin 4 antibody (ab46182)

This image is courtesy of an Abreview submitted by AudreyLafrenaye.

Immunohistochemical analysis of Pig brain tissue

labelling Aquaporin 4 with ab46182 at 1/100. Tissue fixed by perfusion, antigen retrieval performed by microwaving in citric acid buffer. DAB staining.

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