

Product datasheet

Anti-Aquaporin 4 antibody [EPR7040] ab128906

Recombinant RabMAb

★☆☆☆☆ [1 Abreviews](#) [11 References](#) [16 Images](#)

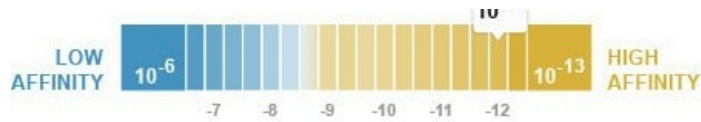
Overview

Product name	Anti-Aquaporin 4 antibody [EPR7040]
Description	Rabbit monoclonal [EPR7040] to Aquaporin 4
Host species	Rabbit
Tested applications	Suitable for: IHC-Fr, IHC-P, WB
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide within Human Aquaporin 4 aa 300 to the C-terminus. The exact sequence is proprietary. Database link: P55087
Positive control	WB: Mouse stomach, Mouse kidney, Rat stomach, Rat kidney and Mouse brain, Human stomach lysates (unboiled); IHC-P: Human cerebrum, Human stomach, Mouse cerebrum, Mouse cerebellum, Mouse stomach, Mouse kidney and Rat cerebrum, Rat stomach tissues. IHC-Fr: Rat stomach, Mouse stomach tissues.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>Mouse: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.</p>

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. Avoid freeze / thaw cycle.
Dissociation constant (K_D)	K _D = 2.60 x 10 ⁻¹² M





[Learn more about \$K_D\$](#)

Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR7040
Isotype	IgG

Applications

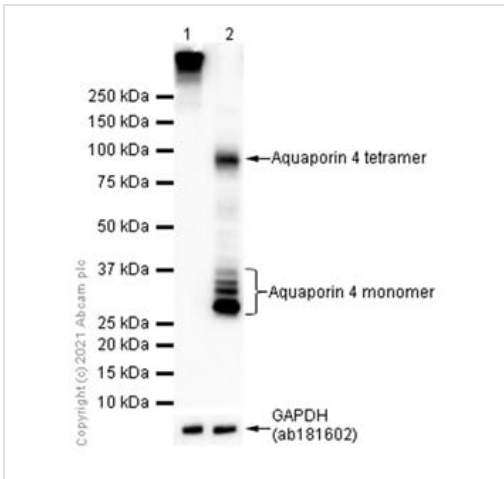
The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab128906 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-Fr		1/100.
IHC-P		1/2000. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
WB		1/1000. Predicted molecular weight: 35 kDa.

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



Western blot - Anti-Aquaporin 4 antibody [EPR7040] (ab128906)

All lanes : Anti-Aquaporin 4 antibody [EPR7040] (ab128906) at 1/1000 dilution

Lane 1 : Mouse brain lysate boiled

Lane 2 : Mouse brain lysate unboiled

Lysates/proteins at 15 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Predicted band size: 35 kDa

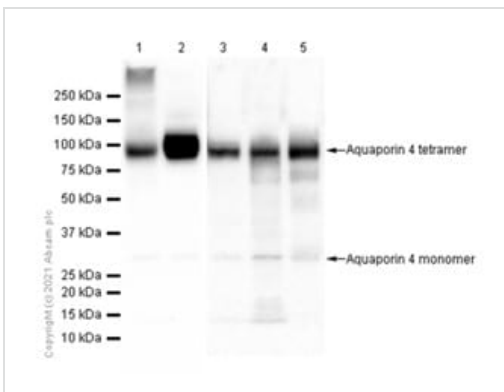
Observed band size: 100,28 kDa

Exposure time: 60 seconds

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

We recommend not to boil the samples after lysis to get desired WB results.

The molecular weight is consistent with what has been described in the literature. Bands observed at 100kDa relate to a tetramer of AQP4 (PMID:18334967, 11742978, 17897643).



Western blot - Anti-Aquaporin 4 antibody [EPR7040] (ab128906)

All lanes : Anti-Aquaporin 4 antibody [EPR7040] (ab128906) at 1/1000 dilution

Lane 1 : Mouse kidney lysate unboiled

Lane 2 : Mouse brain lysate unboiled

Lane 3 : Rat stomach lysate unboiled

Lane 4 : Rat kidney lysate unboiled

Lane 5 : Human stomach lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Predicted band size: 35 kDa

Observed band size: 100,28 kDa

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

'Unboil method' will optimize WB result.

Exposure: Lane1 & Lane2: 20 seconds. Lane3 & Lane4 & Lane5: 120 seconds.

The molecular weight is consistent with what has been described in the literature. Bands observed at 100kDa relate to a tetramer of AQP4 (PMID:18334967, 11742978, 17897643).



Western blot - Anti-Aquaporin 4 antibody [EPR7040] (ab128906)

Anti-Aquaporin 4 antibody [EPR7040] (ab128906) at 1/1000 dilution + Human stomach lysate unboiled at 15 µg

Secondary

Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 35 kDa

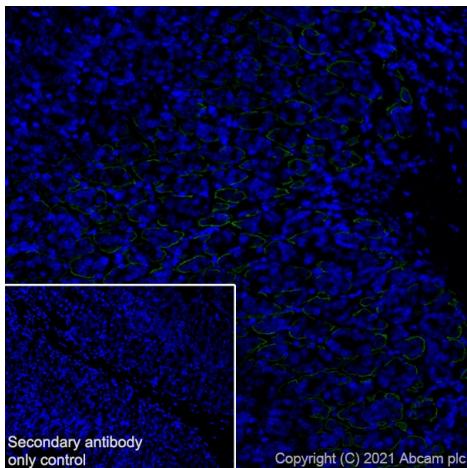
Observed band size: 28,30 kDa

Exposure time: 120 seconds

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

'Unboil method' will optimize WB result.

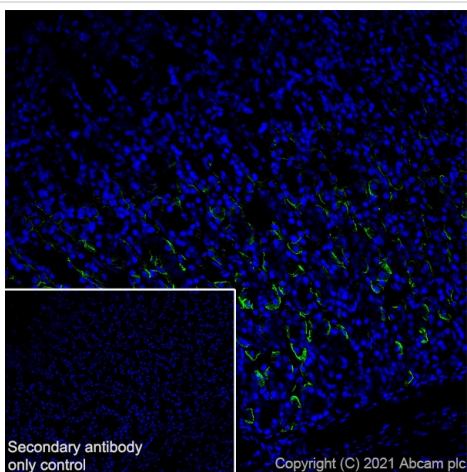
The molecular weight is consistent with what has been described in the literature. (PMID: 22590566, 17897643).



Immunohistochemistry (Frozen sections) - Anti-Aquaporin 4 antibody [EPR7040] (ab128906)

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Mouse stomach (fresh) tissue labeling Aquaporin 4 with ab128906 at 1/100 dilution followed by **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 (2 µg/mL) dilution (Green). Positive staining on mouse stomach. is observed. The nuclear counterstain was DAPI (Blue).

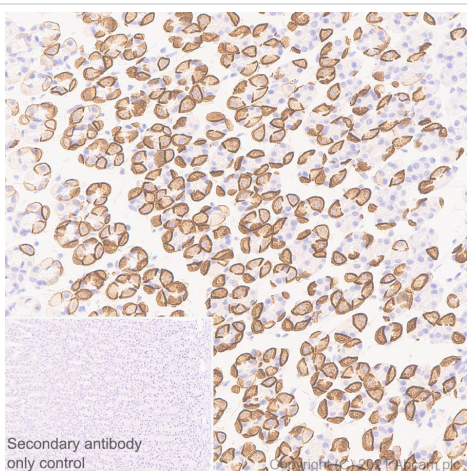
Secondary antibody control: Secondary antibody is **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1000 (2 µg/mL) dilution. Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).



Immunohistochemistry (Frozen sections) - Anti-Aquaporin 4 antibody [EPR7040] (ab128906)

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Rat stomach (fresh) tissue labeling Aquaporin 4 with ab128906 at 1/100 dilution followed by **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 (2 µg/ml) dilution (Green). Positive staining on rat stomach. is observed. The nuclear counterstain was DAPI (Blue).

Secondary antibody control: Secondary antibody is **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1000 (2 µg/ml) dilution. Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

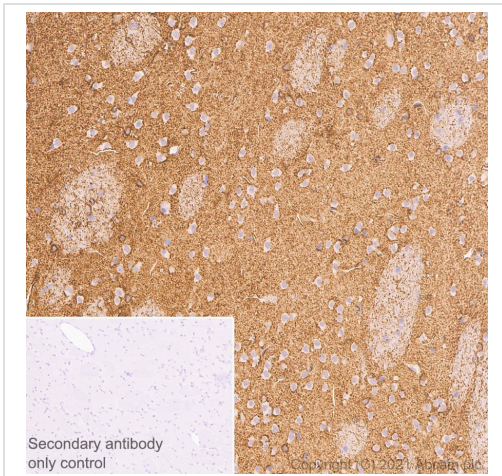


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aquaporin 4 antibody [EPR7040] (ab128906)

Immunohistochemical analysis of paraffin-embedded Rat stomach tissue labeling Aquaporin 4 with ab128906 at 1/2000 dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Positive staining on rat stomach. The section was incubated with ab128906 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution) for 20 mins

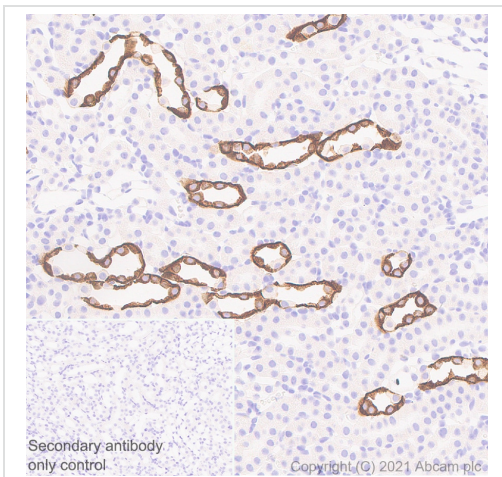


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aquaporin 4 antibody [EPR7040] (ab128906)

Immunohistochemical analysis of paraffin-embedded Rat cerebrum tissue labeling Aquaporin 4 with ab128906 at 1/2000 dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Cytoplasmic staining on rat cerebrum. The section was incubated with ab128906 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution) for 20 mins

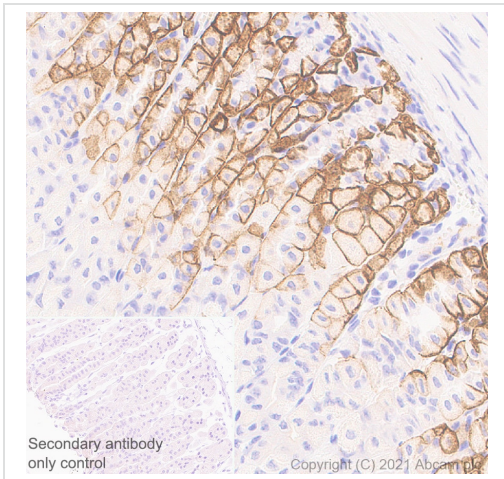


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aquaporin 4 antibody [EPR7040] (ab128906)

Immunohistochemical analysis of paraffin-embedded Mouse kidney tissue labeling Aquaporin 4 with ab128906 at 1/2000 dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Positive staining on mouse kidney. The section was incubated with ab128906 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution) for 20 mins

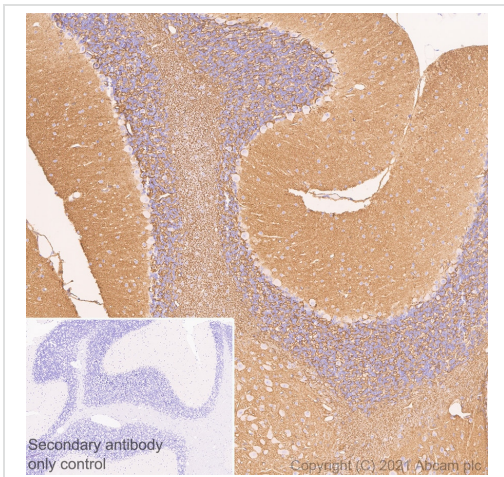


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aquaporin 4 antibody [EPR7040] (ab128906)

Immunohistochemical analysis of paraffin-embedded Mouse stomach tissue labeling Aquaporin 4 with ab128906 at 1/2000 dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Positive staining on mouse stomach. The section was incubated with ab128906 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution) for 20 mins

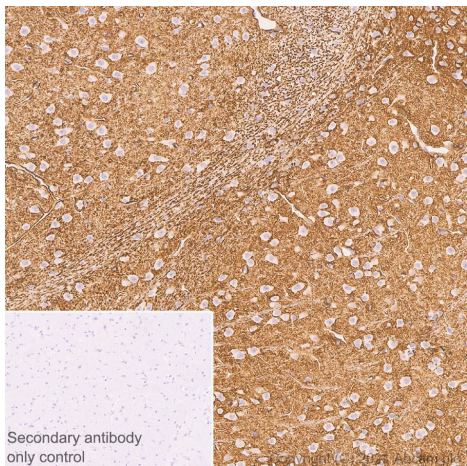


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aquaporin 4 antibody [EPR7040] (ab128906)

Immunohistochemical analysis of paraffin-embedded Mouse cerebellum tissue labeling Aquaporin 4 with ab128906 at 1/2000 dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Cytoplasmic staining on mouse cerebellum. The section was incubated with ab128906 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution) for 20 mins

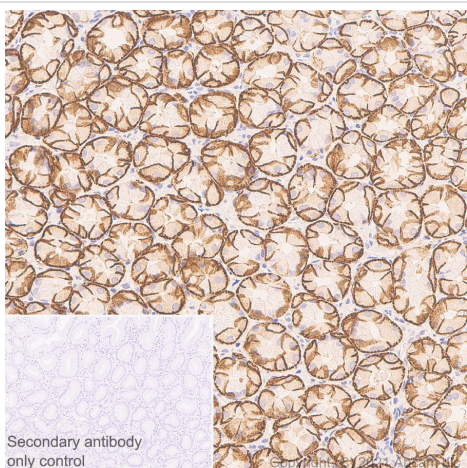


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aquaporin 4 antibody [EPR7040] (ab128906)

Immunohistochemical analysis of paraffin-embedded Mouse cerebrum tissue labeling Aquaporin 4 with ab128906 at 1/2000 dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Cytoplasmic staining on mouse cerebrum. The section was incubated with ab128906 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution) for 20 mins

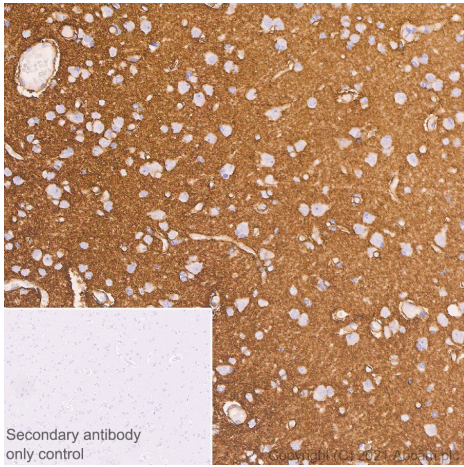


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aquaporin 4 antibody [EPR7040] (ab128906)

Immunohistochemical analysis of paraffin-embedded Human stomach tissue labeling Aquaporin 4 with ab128906 at 1/2000 dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Positive staining on human stomach. The section was incubated with ab128906 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution) for 20 mins

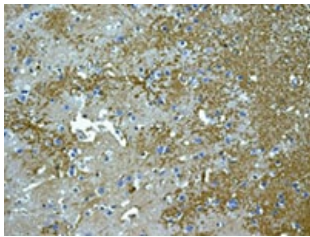


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aquaporin 4 antibody [EPR7040] (ab128906)

Immunohistochemical analysis of paraffin-embedded Human cerebrum tissue labeling Aquaporin 4 with ab128906 at 1/2000 dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Cytoplasmic staining on human cerebrum. The section was incubated with ab128906 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

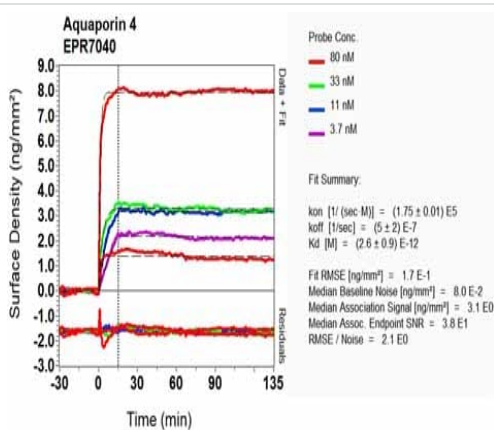
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aquaporin 4 antibody [EPR7040] (ab128906)

ab128906 at 1/100 dilution, staining Aquaporin 4 in paraffin-embedded Human brain tissue by Immunohistochemistry.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Ox-LD Scanning - Anti-Aquaporin 4 antibody [EPR7040] (ab128906)

Equilibrium dissociation constant (K_D)

Learn more about K_D

[Click here to learn more about \$K_D\$](#)

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-Aquaporin 4 antibody [EPR7040] (ab128906)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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