

Anti-Kv2.1/KCNB1 antibody [K89/34] ab192761

[5 References](#) [2 Images](#)

Overview

Product name	Anti-Kv2.1/KCNB1 antibody [K89/34]
Description	Mouse monoclonal [K89/34] to Kv2.1/KCNB1
Host species	Mouse
Tested applications	Suitable for: WB, IHC-P
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	This antibody gave a positive result in IHC in the following FFPE tissue: Human normal Hippocampus
General notes	<p>This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C long term.
Storage buffer	<p>pH: 7.40</p> <p>Preservative: 0.02% Sodium azide</p> <p>Constituents: PBS, 6.97% L-Arginine</p>
Purity	Protein G purified
Clonality	Monoclonal
Clone number	K89/34
Isotype	IgG1
Light chain type	kappa

Applications

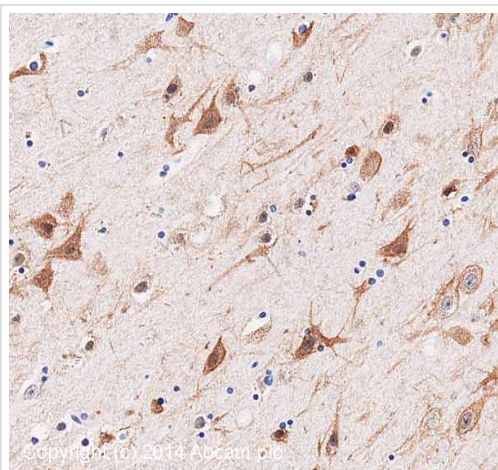
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab192761 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 1 - 5 µg/ml. Detects a band of approximately 98 kDa (predicted molecular weight: 95 kDa).
IHC-P		Use a concentration of 1 µg/ml.

Target

Function	Mediates the voltage-dependent potassium ion permeability of excitable membranes. Channels open or close in response to the voltage difference across the membrane, letting potassium ions pass in accordance with their electrochemical gradient.
Sequence similarities	Belongs to the potassium channel family. B (Shab) (TC 1.A.1.2) subfamily. Kv2.1/KCNB1 sub-subfamily.
Domain	<p>The segment S4 is probably the voltage-sensor and is characterized by a series of positively charged amino acids at every third position.</p> <p>The tail may be important in modulation of channel activity and/or targeting of the channel to specific subcellular compartments.</p>
Post-translational modifications	Highly phosphorylated on serine residues in the C-terminal. Differential phosphorylation on a subset of serines allows graded activity-dependent regulation of channel gating. Phosphorylation on Ser-457, Ser-541, Ser-567, Ser-607, Ser-656 and Ser-720 as well as the N-terminal Ser-15 are all regulated by calcineurin-mediated dephosphorylation. Particularly, Ser-607 and Tyr-128 are significant sites of voltage-gated regulation through phosphorylation/ dephosphorylation activities. Tyr-128 can be dephosphorylated by PTPalpha and cyt-PTPepsilon. Phosphorylation levels on Ser-607 are supersensitive to neuronal activity. Phosphorylation on Ser-567 is reduced during postnatal development with low levels at P2 and P5. Levels then increase to reach adult levels by P14. Phosphorylation levels on Ser-564 and Ser-607 are greatly reduced during seizures, by 40% and 85% respectively.
Cellular localization	Membrane.

Images

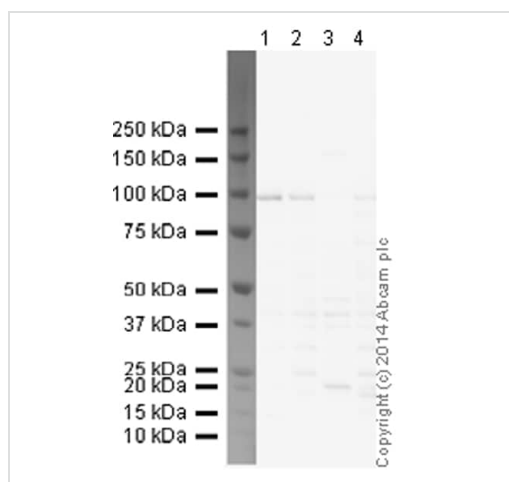


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Kv2.1/KCNB1 antibody [K89/34] (ab192761)

IHC image of Kv2.1/KCNB1 staining in Human Normal Hippocampus 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 ab192761, 1µg/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.

*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre



Western blot - Anti-Kv2.1/KCNB1 antibody [K89/34] (ab192761)

All lanes : Anti-Kv2.1/KCNB1 antibody [K89/34] (ab192761) at 1 µg/ml

Lane 1 : Rat brain normal tissue lysate - total protein ([ab29475](#))

Lane 2 : Hippocampus (Mouse) Tissue Lysate

Lane 3 : Human brain tissue lysate - total protein ([ab29466](#))

Lane 4 : Rat Olfactory Bulb Lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Mouse IgG H&L (HRP) preadsorbed ([ab97040](#)) at 1/50000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 95 kDa

Observed band size: 98 kDa

Exposure time: 20 minutes

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