abcam

## Product datasheet

# Anti-KCNA5/KV1-5 antibody [2D10.D6] ab184691

1 Image

### Overview

| | |
|---|---|
| **Product name** | Anti-KCNA5/KV1-5 antibody [2D10.D6] |
| **Description** | Mouse monoclonal [2D10.D6] to KCNA5/KV1-5 |
| **Host species** | Mouse |
| **Tested applications** | **Suitable for:** WB |
| **Species reactivity** | **Reacts with:** Human |
| **Immunogen** | Synthetic peptide corresponding to Human KCNA5/KV1-5 aa 50-150 conjugated to keyhole limpet haemocyanin.<br>Database link: **P22460**<br>Run BLAST with Run BLAST with |
| **Positive control** | Human brain (hippocampus) tissue lysate; Rat brain tissue. |
| **General notes** | 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.<br>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 |

### 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 long term. Avoid freeze / thaw cycle. |
| **Storage buffer** | Constituent: 100% PBS |
| **Purity** | Protein G purified |
| **Clonality** | Monoclonal |
| **Clone number** | 2D10.D6 |
| **Isotype** | IgG1 |

### Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab184691 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** | | 1/100 - 1/1000. Predicted molecular weight: 67 kDa. |

## Target

**Function** Mediates the voltage-dependent potassium ion permeability of excitable membranes. Assuming opened or closed conformations in response to the voltage difference across the membrane, the protein forms a potassium-selective channel through which potassium ions may pass in accordance with their electrochemical gradient. This channel displays rapid activation and slow inactivation. May play a role in regulating the secretion of insulin in normal pancreatic islets. Isoform 2 exhibits a voltage-dependent recovery from inactivation and an excessive cumulative inactivation.

**Tissue specificity** Pancreatic islets and insulinoma.

**Involvement in disease** Defects in KCNA5 are the cause of atrial fibrillation familial type 7 (ATFB7) [MIM:612240]. Atrial fibrillation is a common disorder of cardiac rhythm that is hereditary in a small subgroup of patients. It is characterized by disorganized atrial electrical activity, progressive deterioration of atrial electromechanical function and ineffective pumping of blood into the ventricles. It can be associated with palpitations, syncope, thromboembolic stroke, and congestive heart failure.

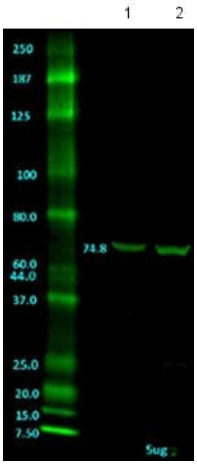
**Sequence similarities** Belongs to the potassium channel family. A (Shaker) (TC 1.A.1.2) subfamily. Kv1.5/KCNA5 sub-subfamily.

**Domain** The amino terminus may be important in determining the rate of inactivation of the channel while the C-terminal PDZ-binding motif may play a role in modulation of channel activity and/or targeting of the channel to specific subcellular compartments.
The segment S4 is probably the voltage-sensor and is characterized by a series of positively charged amino acids at every third position.

**Post-translational modifications** Sumoylated on Lys-221, and Lys-536, preferentially by SUMO3. Sumoylation regulates the voltage sensitivity of the channel.

**Cellular localization** Membrane.

## Images




Western blot - Anti-KCNA5/KV1-5 antibody [2D10.D6] (ab184691)

**All lanes :** Anti-KCNA5/KV1-5 antibody [2D10.D6] (ab184691) at 1/200 dilution

**All lanes :** Human brain hippocampus tissue lysate

Lysates/proteins at 5 µg per lane.

**Predicted band size:** 67 kDa



## Our Abpromise to you: Quality guaranteed and expert technical support

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- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

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