abcam

ab317691

Anti-KCNN3/SK3 antibody [EPR28322-1]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR28322-1
Purification technique	Affinity purification Protein A
Concentration	0.511 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Transfected cell line - Human
Dilution info	1/4000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Species	Rat
Dilution info	1/500
Notes	-

Not recommended

Species	Transfected cell line - Human, Human
Dilution info	-
Notes	-

WB

Not recommended

Species	Human, Mouse, Rat, Transfected cell line - Human
Dilution info	-
Notes	-

IP

Not recommended

Species	Mouse, Rat, Transfected cell line - Human, Human
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Mouse, Rat, Transfected cell line - Human, Human
Dilution info	-
Notes	-

IHC-Fr

Not recommended

Species	Mouse, Rat, Transfected cell line - Human, Human
Dilution info	-
Notes	-

Target data

See full target information KCNN3

Function Small conductance calcium-activated potassium channel that mediates the voltage-independent transmembrane transfer of potassium across the cell membrane through a constitutive interaction with calmodulin which binds the intracellular calcium allowing its opening (PubMed:12808432, PubMed:20562108, PubMed:31155282, PubMed:36502918). The current is characterized by a voltage-independent activation, an intracellular calcium concentration increase-dependent activation and a single-channel conductance of 10 picosiemens

(PubMed:12808432, PubMed:20562108, PubMed:31155282, PubMed:36502918). Also presents an inwardly rectifying current, thus reducing its already small outward conductance of potassium ions, which is particularly the case when the membrane potential displays positive values, above + 20 mV (PubMed:12808432). Activation is followed by membrane hyperpolarization. Thought to regulate neuronal excitability by contributing to the slow component of synaptic afterhyperpolarization (By similarity). Isoform 3. Does not function as a small conductance calcium-activated potassium channel (Probable). Selectively suppresses endogenous KCNN3 currents, in a dominant-negative fashion by decreasing the abundance of functional channels in the plasma membrane, possibly by selectively coassembling with and sequestering native KCNN3 protein in intracellular compartments (PubMed:12808432). This dominant inhibitory effect extends to other members of the SK subfamily (PubMed:12808432).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

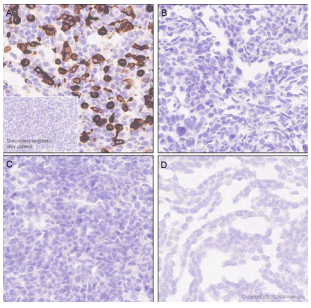
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

---

11 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KCNN3/SK3 antibody [EPR28322-1] (ab317691)

KCNN3/SK3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-KCNN3/SK3 antibody

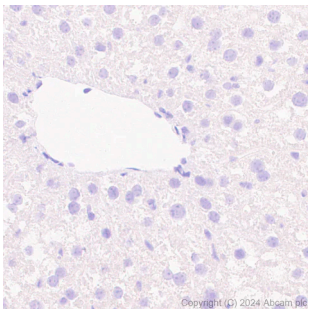
Immunohistochemical analysis of paraffin-embedded (A) HEK-293T (human embryonic kidney epithelial cell) transfected with a KCNN3 expression vector containing a his tag. (B) HEK-293T transfected with a KCNN1 expression vector containing a his tag. (C) HEK-293T transfected with a KCNN2 expression vector containing a his tag. (D) HEK-293T transfected with empty vector containing a his tag. tissue labeling KCNN3/SK3 with ab317691 at 1/4000 (0.128 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

This antibody does not cross-react with human KCNN1 and KCNN2.
Positive staining on (A) HEK-293T transfected with a KCNN3 expression vector containing a his tag. No staining on (B) HEK-293T transfected with KCNN1 expression vector containing a his tag, (C) HEK-293T transfected with KCNN2 expression vector containing a his tag and (D) HEK-293T transfected with empty vector containing a his tag.
The section was incubated with ab317691 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 was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KCNN3/SK3 antibody [EPR28322-1] (ab317691)

KCNN3/SK3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse liver using rabbit Anti-KCNN3/SK3 antibody

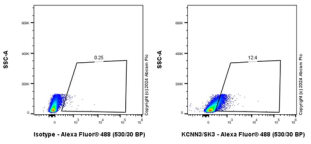
Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling KCNN3/SK3 with ab317691 at 1/2000 (0.256 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Negative control: No staining on mouse liver.
The section was incubated with ab317691 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 was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



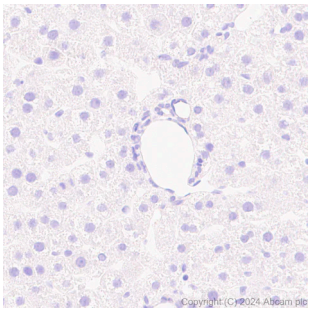
Flow Cytometry (Intracellular) - Anti-KCNN3/SK3 antibody [EPR28322-1] (ab317691)

KCNN3/SK3 Flow Cytometry (Intracellular) staining of Rat spleen cell using rabbit Anti-KCNN3/SK3 antibody

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Rat spleen cell cells labelling KCNN3/SK3 with ab317691 at 1/500 dilution (0.1ug) / Right (Red) compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Low expression: spleen



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KCNN3/SK3 antibody [EPR28322-1] (ab317691)

KCNN3/SK3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Rat liver using rabbit Anti-KCNN3/SK3 antibody

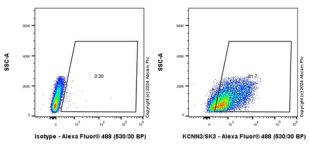
Immunohistochemical analysis of paraffin-embedded Rat liver tissue labeling KCNN3/SK3 with ab317691 at 1/2000 (0.256 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Negative control: No staining on rat liver.
The section was incubated with ab317691 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).

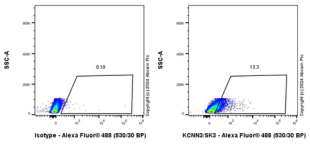
Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Flow Cytometry (Intracellular) - Anti-KCNN3/SK3 antibody [EPR28322-1] (ab317691)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Rat primary neuron cells labelling KCNN3/SK3 with ab317691 at 1/500 dilution (0.1ug) / Right (Red) compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

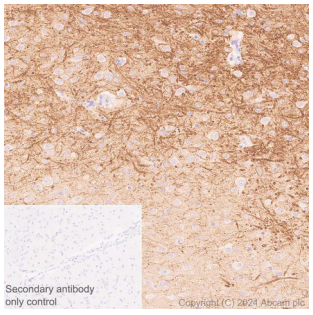


Flow Cytometry (Intracellular) - Anti-KCNN3/SK3 antibody [EPR28322-1] (ab317691)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Mouse spleen cell cells labelling KCNN3/SK3 with ab317691 at 1/500 dilution (0.1ug) / Right (Red) compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Low expression: spleen



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KCNN3/SK3 antibody [EPR28322-1] (ab317691)

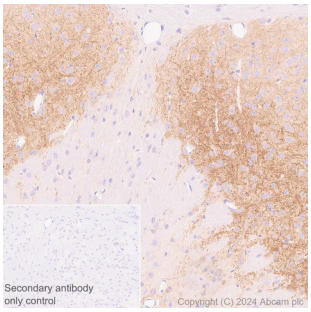
Immunohistochemical analysis of paraffin-embedded Rat cerebrum tissue labeling KCNN3/SK3 with ab317691 at 1/2000 (0.256 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on rat cerebrum (PMID: 12427825).
The section was incubated with ab317691 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 was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KCNN3/SK3 antibody [EPR28322-1] (ab317691)

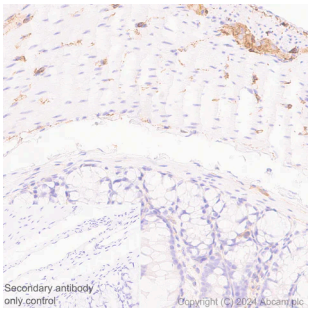
Immunohistochemical analysis of paraffin-embedded Mouse brain tissue labeling KCNN3/SK3 with ab317691 at 1/2000 (0.256 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on mouse brain.
The section was incubated with ab317691 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 was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KCNN3/SK3 antibody [EPR28322-1] (ab317691)

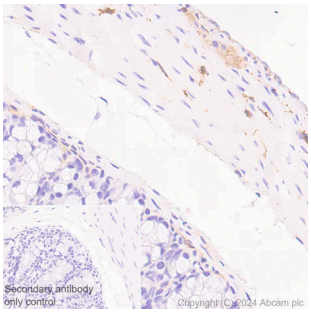
Immunohistochemical analysis of paraffin-embedded Rat colon tissue labeling KCNN3/SK3 with ab317691 at 1/2000 (0.256 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on myenteric plexus of rat colon.
The section was incubated with ab317691 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 was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KCNN3/SK3 antibody [EPR28322-1] (ab317691)

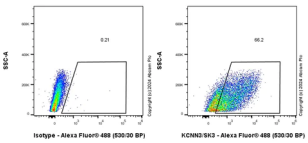
Immunohistochemical analysis of paraffin-embedded Mouse colon tissue labeling KCNN3/SK3 with ab317691 at 1/2000 (0.256 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on myenteric plexus of mouse colon.
The section was incubated with ab317691 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 was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Flow Cytometry (Intracellular) - Anti-KCNN3/SK3 antibody [EPR28322-1] (ab317691)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Mouse primary neuron cells labelling KCNN3/SK3 with ab317691 at 1/500 dilution (0.1ug) / Right (Red) compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.