abcam

Product datasheet

Anti-SGK1 antibody ab43606

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Overview

Product name	Anti-SGK1 antibody
Description	Rabbit polyclonal to SGK1
Host species	Rabbit
Specificity	Replenishment batches of our polyclonal antibody, ab43606 are tested in WB. Previous batches were additionally validated in ICC/IF. This application is still expected to work and is covered by our Abpromise guarantee. You may also be interested in our alternative recombinant antibody, **ab32374**.
Tested applications	**Suitable for:** WB, ICC/IF
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rat, Rabbit, Chicken
Immunogen	Synthetic peptide corresponding to Human SGK1 aa 300-400 conjugated to keyhole limpet haemocyanin. (Peptide available as **ab43605**)
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. 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 or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our

scientific support team who will be happy to help.

Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab43606 in the following tested applications.

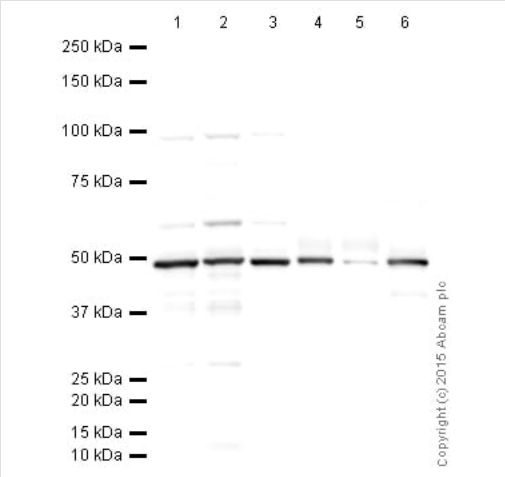
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 49 kDa (predicted molecular weight: 49 kDa).
ICC/IF	★★★☆☆ (1)	Use a concentration of 10 µg/ml.

Target

Function	Protein kinase that plays an important role in cellular stress response. Activates certain potassium, sodium, and chloride channels, suggesting an involvement in the regulation of processes such as cell survival, neuronal excitability and renal sodium excretion. Sustained high levels and activity may contribute to conditions such as hypertension and diabetic nephropathy. Mediates cell survival signals, phosphorylates and negatively regulates pro-apoptotic FOXO3A. Phosphorylates NEDD4L, which leads to its inactivation and to the subsequent activation of various channels and transporters such as ENaC, KCNA3/Kv1.3 or EAAT1. Isoform 2 exhibited a greater effect on cell plasma membrane expression of ENaC and Na(+) transport than isoform 1.
Tissue specificity	Expressed in most tissues with highest levels in the pancreas, followed by placenta, kidney and lung. Isoform 2 is strongly expressed in brain and pancreas, weaker in heart, placenta, lung, liver and skeletal muscle.
Sequence similarities	Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. Contains 1 AGC-kinase C-terminal domain. Contains 1 protein kinase domain.
Domain	Isoform 2 subcellular localization at the plasma membrane is mediated by the sequences within the first 120 amino acids.
Post-translational modifications	Regulated by phosphorylation. Phosphoinositide 3-kinase (PI3-kinase) pathway promotes phosphorylation at Ser-422 which in turn increases the phosphorylation of Thr-256 by PDPK1. Ubiquitinated by NEDD4L; which promotes proteasomal degradation. Ubiquitinated by SYVN1 at the endoplasmic reticulum; which promotes rapid proteasomal degradation and maintains a high turnover rate in resting cells. Isoform 2 shows enhanced stability. Isoform 2 resistance to proteasomal degradation is mediated by the sequences within the first 120-amino acid.
Cellular localization	Cell membrane and Cytoplasm. Nucleus. Endoplasmic reticulum. Nuclear, upon phosphorylation.

Images



Western blot - Anti-SGK1 antibody (ab43606)

All lanes : Anti-SGK1 antibody (ab43606) at 1 µg/ml

Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate
Lane 2 : Jurkat (Human T cell lymphoblast-like cell line) Whole Cell Lysate
Lane 3 : NIH 3T3 (Mouse embryonic fibroblast cell line) Whole Cell Lysate
Lane 4 : Human pancreas tissue lysate - total protein (**ab29816**)
Lane 5 : Lung (Human) Tissue Lysate
Lane 6 : Human brain tissue lysate - total protein (**ab29466**)

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) preadsorbed at 1/50000 dilution

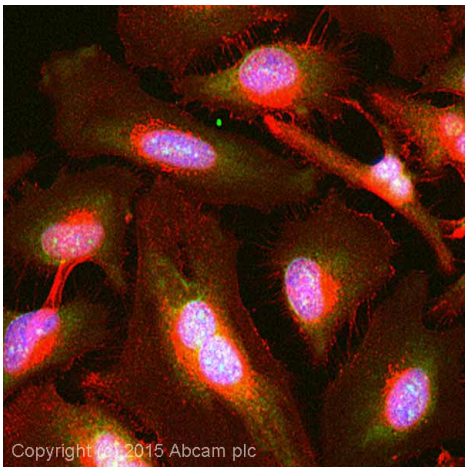
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 49 kDa
Observed band size: 49 kDa
Additional bands at: 38 kDa, 51 kDa (possible isoform), 60 kDa (possible isoform), 95 kDa. We are unsure as to the identity of these extra bands.

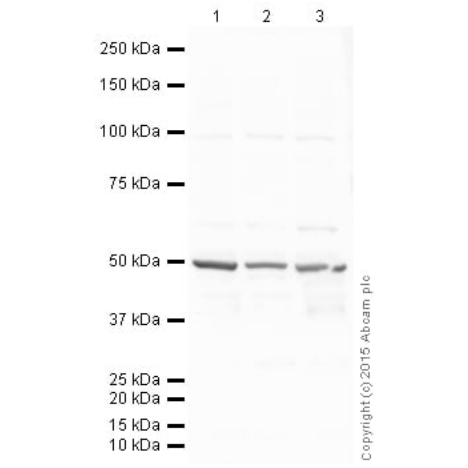
Exposure time: 5 seconds

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 2% Bovine Serum Albumin before being incubated with ab43606 overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP, and visualised using ECL development solution **ab133406**.



Immunocytochemistry/ Immunofluorescence - Anti-SGK1 antibody (ab43606)

ICC/IF image of ab43606 stained HeLa cells. The cells were 100% methanol fixed (5 min) then permeabilised using 0.1% PBS-Triton and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to further permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab43606 at 5µg/ml overnight at +4°C. The secondary antibody (pseudo-colored green) was Alexa Fluor® 488 goat anti- rabbit (**ab150081**) IgG (H+L) preadsorbed, used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (pseudo-colored red) at a 1/200 dilution for 1h at room temperature. DAPI was used to stain the cell nuclei (pseudo-colored blue) at a concentration of 1.43µM for 1hour at room temperature.



Western blot - Anti-SGK1 antibody (ab43606)

All lanes : Anti-SGK1 antibody (ab43606) at 1 µg/ml

Lane 1 : Human BT549 (Breast carcinoma cell line) Whole Cell Lysate
Lane 2 : T-47D whole cell lysate (**ab14899**)
Lane 3 : A431 (Human epithelial carcinoma cell line) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) preadsorbed at 1/50000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 49 kDa
Observed band size: 49 kDa

Exposure time: 1 minute

This blot was produced using a 4-12% Bis-tris gel under the MOPS

buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 2% Bovine Serum Albumin before being incubated with ab43606 overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP, and visualised using ECL development solution **ab133406**.

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