Anti-SGK1 Antibody [SC05-71]

ET1610-19

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IP, FC, IF-Tissue
Molecular Wt:	Predicted band size: 49 kDa
Clone number:	SC05-71

Description: Serum- and glucocorticoid-regulated kinase (SGK), also known as SGK1, is a serine/threonine protein kinase and a member of the "AGC" subfamily, which includes protein kinases A, G, and C. SGK plays an important role in activating certain potassium, sodium, and chloride channels, suggesting an involvement in the regulation of processes such as cell survival, neuronal excitability, and renal sodium excretion. SGK contains a catalytic domain, which is most similar to Akt1 (also known as protein kinase B or PKB). SGK is a downstream target of PI 3-kinase-stimulated growth factor signaling, with 3-phosphoinositide-dependent protein kinase 1 (PDK1) capable of phosphorylating the activation-loop of SGK at Threonine-256. The adrenal corticosteroid hormone, Aldosterone, induces the transcription of SGK, which mediates Na + transport by stimulating epithelial sodium channel activity. The SGK promoter contains a glucocorticoid response element and an SP-1 regulatory element, and is a transcriptional target for p53. SGK is also a component of the p38 MAPK-mediated response to hyperosmotic stress. The human SGK gene maps to chromosome 6q23 and encodes the 431-amino acid SGK protein.

Immunogen: Synthetic peptide within human SGK1 aa 40-80.

Positive control: Mouse kidney tissue lysates, human kidney tissue lysates, human kidney tissue, mouse kidney tissue, rat kidney tissue, human liver tissue, mouse liver tissue, 293.

Subcellular location: Cytoplasm, Nucleus, Cell membrane, Mitochondrion.

Database links: SwissProt: O00141 Human | Q9WVC6 Mouse | Q06226 Rat

Recommended Dilutions:

WB	1:500-1:1,000
IHC-P	1:50-1:200
FC	1:50-1:100
IP	Use at an assay dependent concentration.
IF-Tissue	1:200

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

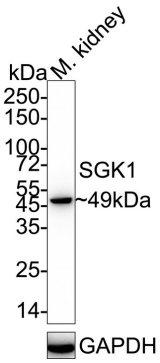

Fig1: Western blot analysis of SGK1 on mouse kidney tissue lysates with Rabbit anti-SGK1 antibody (ET1610-19) at 1/500 dilution.

Lysates/proteins at 40 µg/Lane.

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

Exposure time: 30 seconds; ECL: K1802;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1610-19) at 1/500 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

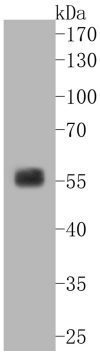

Fig2: Western blot analysis of SGK1 on human kidney tissue lysates. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody (ET1610-19, 1/500) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:5,000 dilution was used for 1 hour at room temperature.

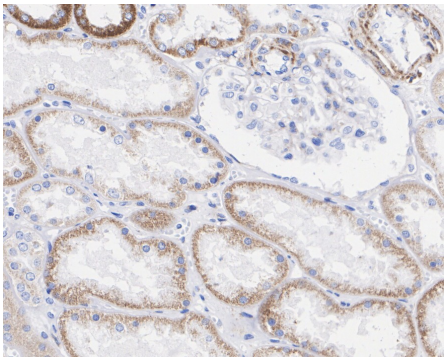

Fig3: Immunohistochemical analysis of paraffin-embedded human kidney tissue with Rabbit anti-SGK1 antibody (ET1610-19) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1610-19) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

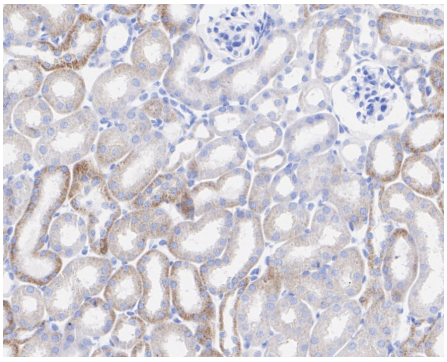

Fig4: Immunohistochemical analysis of paraffin-embedded mouse kidney tissue with Rabbit anti-SGK1 antibody (ET1610-19) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1610-19) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

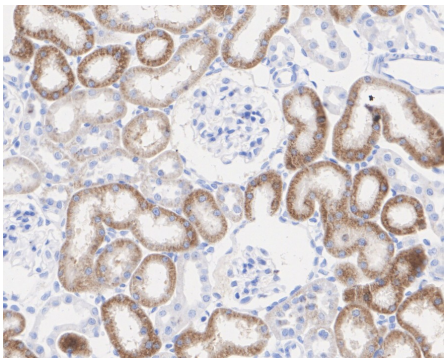

Fig5: Immunohistochemical analysis of paraffin-embedded rat kidney tissue with Rabbit anti-SGK1 antibody (ET1610-19) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1610-19) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

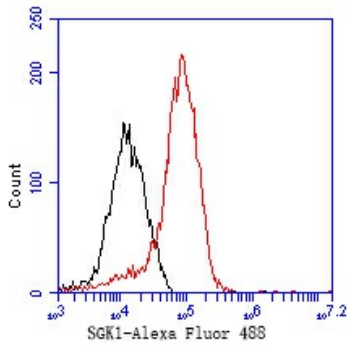

Fig6: Flow cytometric analysis of SGK1 was done on 293 cells. The cells were fixed, permeabilized and stained with the primary antibody (ET1610-19, 1/50) (red). After incubation of the primary antibody at room temperature for an hour, the cells were stained with a Alexa Fluor 488-conjugated Goat anti-Rabbit IgG Secondary antibody at 1/1000 dilution for 30 minutes.Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Anacker C et al. Role for the kinase SGK1 in stress, depression, and glucocorticoid effects on hippocampal neurogenesis. Proc Natl Acad Sci U S A 110:8708-13 (2013).
2. Costin BN et al. Ethanol regulation of serum glucocorticoid kinase 1 expression in DBA2/J mouse prefrontal cortex. PLoS One 8:e72979 (2013).