

Rabbit SGK Polyclonal Antibody | anti-SGK antibody

Phospho-SGK (Ser422) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA30942	Rabbit	Human, Mouse, Rat	Western Blot, Immunohistochemistry, Immunofluorescence, Immunocytochemistry, ELISA

PRODUCT SYNONYMS

SGK; Polyclonal Antibody; Phospho-SGK (Ser422) Antibody; OTTHUMP00000017247; Serine/threonine protein kinase SGK; Serine/threonine protein kinase Sgk1; Serine/threonine-protein kinase Sgk1; Serum and glucocorticoid regulated kinase; Serum/glucocorticoid regulated kinase 1; Serum/glucocorticoid regulated kinase; Serum/glucocorticoid-regulated kinase 1; SGK 1; SGK1; Sgk1 variant i3; SGK1_HUMAN; anti-SGK antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-SGK (Ser422) antibody detects endogenous levels of SGK only when phosphorylated at Serine 422
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho- and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	526
Applicable Applications for anti-SGK antibody	WB (Western Blot), IHC (Immunohistochemistry), IF (Immunofluorescence), ICC (Immunocytochemistry), ELISA
Application Notes	WB: 1:500-1:2000 IHC: 1:50-1:1000 IF/ICC: 1:100-1:500
Immunogen	A synthesized peptide derived from human SGK around the phosphorylation site of Serine 422
Subcellular Location	Cell Membrane and Cytoplasm. Nucleus. Endoplasmic Reticulum. Nuclear, upon phosphorylation.
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.
Predicted Cross Reactivity	Pig, Zebrafish, Bovine, Horse, Sheep, Rabbit, Dog, Chicken, Xenopus
Similarity	Pig (100%), Zebrafish (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%), Xenopus (91%)
Conjugation	Unconjugated
Epitope	Phospho Ser422
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



WB (Western Blot)
Western blot analysis of SGK phosphorylation expression in Insulin treated HeLa whole cell lysates, The lane on the left is treated with the antigen-specific peptide.



IF (Immunofluorescence)
AAA30942 staining HeLa by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



IHC (Immunohistochemistry)
AAA30942 at 1/100 staining rat intestinal tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



IHC (Immunohistochemistry)
AAA30942 at 1/100 staining rat ovarian tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



WB (Western Blot)
Western blot analysis of Phospho-SGK (Ser422) expression in various lysates



IHC (Immunohistochemistry)
AAA30942 at 1/100 staining rat uterine tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-SGK antibody	Description: This gene encodes a serine/threonine protein kinase that is highly similar to the rat serum-and glucocorticoid-induced protein kinase (SGK). This gene was identified in a screen of hepatocellular genes regulated in response to cellular hydration or swelling. Cellular hydration is a catabolic signal, stimulating glycogenolysis and proteolysis, and inhibiting protein and glycogen synthesis. Function: Serine/threonine-protein kinase which is involved in the regulation of a wide variety of ion channels, membrane transporters, cellular enzymes, transcription factors, neuronal excitability, cell growth, proliferation, survival, migration and apoptosis. Plays an important role in cellular stress response. Contributes to regulation of renal Na+ retention, renal K+ elimination, salt appetite, gastric acid secretion, intestinal Na+/H+ exchange and nutrient transport, insulin-dependent salt sensitivity of blood pressure, salt sensitivity of peripheral glucose uptake, cardiac repolarization and memory consolidation. Up-regulates Na+ channels: SCNN1A/ENAC, SCN5A and ASIC1/ACCN2, K+ channels: KCNJ1/ROMK1, KCNA1-5, KCNQ1-5 and KCNE1, epithelial Ca2+ channels: TRPV5 and TRPV6, chloride channels: BSND, CLCN2 and CFTR, glutamate transporters: SLC1A3/EAAT1, SLC1A2/EAAT2, SLC1A1/EAAT3, SLC1A6/EAAT4 and SLC1A7/EAAT5, amino acid transporters: SLC1A5/ASCT2, SLC38A1/SN1 and SLC6A19, creatine transporter: SLC6A8, Na+/dicarboxylate cotransporter: SLC13A2/NADC1, Na+-dependent phosphate cotransporter: SLC34A2/NAPI-2B, glutamate receptor: GRIK2/GLUR6. Up-regulates carriers: SLC9A3/NHE3, SLC12A1/NKCC2, SLC12A3/NCC, SLC5A3/SMIT, SLC2A1/GLUT1, SLC5A1/SGLT1 and SLC15A2/PEPT2. Regulates enzymes: GSK3A/B, PMM2 and Na+/K+ ATPase, and transcription factors: CTNNB1 and nuclear factor NF-kappa-B. Stimulates sodium transport into epithelial cells by enhancing the stability and expression of SCNN1A/ENAC. This is achieved by phosphorylating the NEDD4L ubiquitin E3 ligase, promoting its interaction with 14-3-3 proteins, thereby preventing it from binding to SCNN1A/ENAC and targeting it for degradation. Regulates store-operated Ca(+2) entry (SOCE) by stimulating ORAI1 and STIM1. Regulates KCNJ1/ROMK1 directly via its phosphorylation or indirectly via increased interaction with SLC9A3R2/NHERF2. Phosphorylates MDM2 and activates MDM2-dependent ubiquitination of p53/TP53. Phosphorylates MAPT/TAU and mediates microtubule depolymerization and neurite formation in hippocampal neurons. Phosphorylates SLC2A4/GLUT4 and up-regulates its activity. Phosphorylates APBB1/FE65 and promotes its localization to the nucleus. Phosphorylates MAPK1/ERK2 and activates it by enhancing its interaction with MAP2K1/MEK1 and MAP2K2/MEK2. Phosphorylates FBXW7 and plays an inhibitory role in the NOTCH1 signaling. Phosphorylates FOXO1 resulting in its relocalization from the nucleus to the cytoplasm. Phosphorylates FOXO3, promoting its exit from the nucleus and interference with FOXO3-dependent transcription. Phosphorylates BRAF and MAP3K3/MEKK3 and inhibits their activity. Phosphorylates SLC9A3/NHE3 in response to dexamethasone, resulting in its activation and increased localization at the cell membrane. Phosphorylates CREB1. Necessary for vascular remodeling during angiogenesis. Sustained high levels and activity may contribute to conditions such as hypertension and diabetic nephropathy. Isoform 2 exhibited a greater effect on cell plasma membrane expression of SCNN1A/ENAC and Na+ transport than isoform 1. Subunit Structure: Homodimer; disulfide-linked. Forms a trimeric complex with FBXW7 and NOTCH1. Interacts with MAPK3/ERK1, MAPK1/ERK2, MAP2K1/MEK1, MAP2K2/MEK2, NEDD4, NEDD4L, MAPT/TAU, MAPK7, CREB1, SLC9A3R2/NHERF2 and KCNJ1/ROMK1. Associates with the mammalian target of rapamycin complex 2 (mTORC2) via an interaction with MAPKAP1/SIN1. Post-translational Modifications: Regulated by phosphorylation. Activated by phosphorylation on Ser-422 by mTORC2, transforming it into a substrate for PDPK1 which phosphorylates it on Thr-256. Phosphorylation on Ser-397 and Ser-401 are also essential for its activity. Phosphorylation on Ser-78 by MAPK7 is required for growth factor-induced cell cycle progression. 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. Similarity: Isoform 2 subcellular localization at the cell membrane and resistance to proteasomal degradation is mediated by the sequences within the first 120 amino acids. Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	219521876
NCBI GeneID	6446
NCBI Accession #	NP_001137148.1
NCBI GenBank Nucleotide #	NM_001143676.1
UniProt Accession #	O00141; Q5TCN2; Q5TCN3; Q5TCN4; Q5VY65; Q9UN56; B7UUP7; B7UUP8; B7UUP9; B7Z5B2; E1P583
Molecular Weight	Observed: 54 kDa Predicted: 49 kDa

NCBI Official Full Name	serine/threonine-protein kinase Sgk1 isoform 2
NCBI Official Synonym Full Names	serum/glucocorticoid regulated kinase 1
NCBI Official Symbol	SGK1
NCBI Official Synonym Symbols	SGK
NCBI Protein Information	serine/threonine-protein kinase Sgk1
UniProt Protein Name	Serine/threonine-protein kinase Sgk1
UniProt Gene Name	SGK1
UniProt Synonym Gene Names	SGK

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/sgk-antibody-western-blot-immunohistochemistry-immunofluorescence-immunocytochemistry-elisa/30942>