Rabbit SGK1 Polyclonal Antibody | anti-SGK1 antibody

Phospho-SGK1 (Thr256) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329857	**Rabbit**	**HumanPredicted Reactivity: Pig (88%), Zebrafish (86%), Bovine (88%), Horse (86%), Sheep (88%), Rabbit (88%), Chicken (88%)**	**ELISA, Immunocytochemistry, Immunofluorescence, Western Blot**

PRODUCT SYNONYMS

SGK1; Polyclonal Antibody; Phospho-SGK1 (Thr256) 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; SGK; Sgk1 variant i3; SGK1_HUMAN; anti-SGK1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human Predicted Reactivity: Pig (88%), Zebrafish (86%), Bovine (88%), Horse (86%), Sheep (88%), Rabbit (88%), Chicken (88%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-SGK1 (Thr256) Antibody detects endogenous levels of SGK1 only when phosphorylated at Thr256. 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.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-SGK1 antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	A synthesized peptide derived from human SGK1 around the phosphorylation site of Thr256.
Conjugation	Unconjugated
Fragment	Fab fragment
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.
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.
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.

Subcellular Location	Cytoplasm. Nucleus. Endoplasmic reticulum membrane. Cell membrane. Mitochondrion. Note: The subcellular localization is controlled by the cell cycle, as well as by exposure to specific hormones and environmental stress stimuli. In proliferating cells, it shuttles between the nucleus and cytoplasm in synchrony with the cell cycle, and in serum/growth factor-stimulated cells it resides in the nucleus. In contrast, after exposure to environmental stress or treatment with glucocorticoids, it is detected in the cytoplasm and with certain stress conditions is associated with the mitochondria. In osmoregulation through the epithelial sodium channel, it can be localized to the cytoplasmic surface of the cell membrane. Nuclear, upon phosphorylation.Cell membrane.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IF (Immunofluorescence)
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.



WB (Western Blot)
Western blot analysis SGK1 (Phospho-Thr256) using Insulin treated HeLa whole cell lysates.-/+ means absence or presence of N peptideï¼ˆnon-phospho peptide) and P peptide(phospho peptide).

ADDITIONAL INFORMATION

Related Product Information for anti-SGK1 antibody	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 Ca (2+) 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.

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	48,942 Da
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; Sgk1 variant i3; serine/threonine protein kinase SGK; serum/glucocorticoid-regulated kinase 1
UniProt Protein Name	Serine/threonine-protein kinase Sgk1
UniProt Gene Name	**SGK1**
UniProt Synonym Gene Names	SGK
UniProt Entry Name	SGK1_HUMAN

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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