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Mouse Sgk1 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP18909b

Specification

Mouse Sgk1 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession Q9WVC6

Mouse Sgk1 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 20393

Other Names
Serine/threonine-protein kinase Sgk1, Serum/glucocorticoid-regulated kinase 1, Sgk1, Sgk

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Mouse Sgk1 Antibody (C-term) Blocking Peptide - Protein Information

Name Sgk1

Synonyms Sgk

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 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.

Cellular 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 (By similarity).

Mouse Sgk1 Antibody (C-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

Mouse Sgk1 Antibody (C-term) Blocking Peptide - Images

Mouse Sgk1 Antibody (C-term) Blocking Peptide - Background

This gene encodes a serine/threonine protein kinase thatplays an important role in cellular stress response. This kinaseactivates certain potassium, sodium, and chloride channels,suggesting an involvement in the regulation of processes such ascell survival, neuronal excitability, and renal sodium excretion.This enzyme is activated by protein phosphorylation and degradedvia the ubiquitination and proteasome pathway. Multiple transcriptvariants encoding different isoforms have been found for this gene.A pseudogene of this gene was identified on chromosome 12.

Mouse Sgk1 Antibody (C-term) Blocking Peptide - References

Gao, D., et al. Mol. Cell 39(5):797-808(2010)Catela, C., et al. Dev. Dyn. 239(8):2149-2160(2010)Hallows, K.R., et al. J. Biol. Chem. 285(28):21671-21678(2010)Kaji, T., et al. Front Biosci (Elite Ed) 2, 1355-1361 (2010) :Ackermann, T.F., et al. Cell. Physiol. Biochem. 25(6):775-786(2010)