1. Phylogeny  
   Serine/threonine‐protein kinase SGK1 is a member of the AGC kinase family, a broadly conserved subgroup of serine/threonine kinases that includes proteins such as protein kinase A, protein kinase C, and AKT. SGK1, together with its homologs SGK2 and SGK3, forms a distinct subfamily that is present in most eukaryotes, indicating that these kinases are part of an ancient evolutionary core (cicenas2022sgk1incancer pages 1-3, lang2020theenigmaticrole pages 2-3). Orthologs of SGK1 have been identified in a wide range of species—from yeast to mammals—underscoring its fundamental role in cell regulation. In mammals, SGK1 is ubiquitously expressed with orthologous genes being conserved across species, which suggests that core functions in ion transport regulation, survival signaling, and stress response have been maintained throughout evolution (cicenas2022sgk1incancer pages 9-10, maestro2020serumandglucocorticoidinduced pages 1-3).
2. Reaction Catalyzed  
   SGK1 catalyzes the transfer of a phosphate group from adenosine triphosphate (ATP) to serine or threonine residues on its protein substrates. The overall reaction can be written as: ATP + [protein]-(Ser/Thr) → ADP + [protein]-(phospho-Ser/Thr) + H⁺. This phosphorylation is an essential post-translational modification that modulates substrate activity, localization, interaction with other proteins, and stability (jang2022serumandglucocorticoidregulated pages 1-3, sang2021sgk1inhuman pages 3-4).
3. Cofactor Requirements  
   The catalytic activity of SGK1 is dependent on divalent metal ions, predominantly Mg²⁺, which are required to coordinate the phosphate of ATP in the enzyme’s active site. In addition, the efficiency of its catalytic mechanism depends on ATP as a co-substrate. Although not extensively detailed in some excerpts, it is broadly acknowledged that like other kinases in the AGC family, SGK1 requires these cofactors to achieve proper catalytic turnover (cicenas2022sgk1incancer pages 1-3, maestro2020serumandglucocorticoidinduced pages 3-4).
4. Substrate Specificity  
   SGK1 phosphorylates a wide array of substrates involved in numerous cellular processes, including ion channel regulation, transcription, and survival signaling. Its substrate specificity often depends on the recognition of serine/threonine residues within defined amino acid motifs; numerous studies report that SGK1 phosphorylates targets that harbor motifs such as R-X-R-X-X-(S/T) and related sequences. For example, SGK1 phosphorylates the epithelial sodium channel (ENaC) regulatory protein NEDD4L, which in turn modulates the stability of ENaC subunits, and it phosphorylates transcription factors like FOXO1 and FOXO3, leading to their nuclear exclusion (cicenas2022sgk1incancer pages 1-3, jang2022serumandglucocorticoidregulated pages 3-4, sang2021sgk1inhuman pages 13-14). Additionally, substrates such as NDRG1, MDM2 and proteins involved in the regulation of ion transport and metabolism are targeted by SGK1, reinforcing its role as a multifunctional serine/threonine kinase (cicenas2022sgk1incancer pages 8-9, maestro2020serumandglucocorticoidinduced pages 12-13).
5. Structure  
   SGK1 displays a domain organization that consists of three primary regions: an N-terminal variable region, a central catalytic kinase domain, and a C-terminal tail. The catalytic domain encompasses the ATP binding pocket and several conserved motifs typical of AGC kinases, including essential catalytic residues such as those involved in ATP binding and phosphate transfer. A unique structural attribute of SGK1 is the absence of the lipid-binding pleckstrin homology (PH) domain, which differentiates it from kinases such as AKT (cicenas2022sgk1incancer pages 1-3). In some isoforms, the N-terminal region harbors targeting signals including a mitochondrial targeting sequence and may also contain nuclear localization signals that allow dynamic subcellular distribution in response to extracellular stimuli, such as serum or glucocorticoids (maestro2020serumandglucocorticoidinduced pages 11-12, lang2020theenigmaticrole pages 14-14). Although high-resolution crystal structural data are not detailed in every excerpt, homology modeling and co‐crystallization studies have provided insights into the active conformation and inhibitor binding sites, which are crucial for structure-based inhibitor design (jang2022serumandglucocorticoidregulated pages 8-9, maestro2020serumandglucocorticoidinduced pages 12-13).
6. Regulation  
   SGK1 activity is regulated at multiple levels, beginning with its transcription and continuing through post-translational modifications. Among the best characterized regulatory mechanisms is phosphorylation: SGK1 requires phosphorylation on two key residues for full activation. First, mTORC2 phosphorylates the hydrophobic motif at serine 422, inducing a conformational change that facilitates the subsequent phosphorylation of the activation loop residue threonine 256 by PDK1 (cicenas2022sgk1incancer pages 1-3, jang2022serumandglucocorticoidregulated pages 1-3). In addition to phosphorylation, the expression of SGK1 is tightly controlled by extracellular stimuli, notably glucocorticoids and serum, which trigger transcriptional upregulation via binding of the glucocorticoid receptor and other transcription factors to the SGK1 promoter (jang2022serumandglucocorticoidregulated pages 3-4, maestro2020serumandglucocorticoidinduced pages 1-3). Moreover, SGK1 protein is rapidly turned over with a relatively short mRNA and protein half-life, and its degradation is mediated by ubiquitination pathways involving E3 ubiquitin ligases such as NEDD4L (cicenas2022sgk1incancer pages 1-3, maestro2020serumandglucocorticoidinduced pages 4-6). Other regulatory factors include second messengers like Ca²⁺, cAMP, reactive oxygen species, and cellular stress signals that further modulate SGK1 activity and localization (lang2020theenigmaticrole pages 1-2, nahar2023theroleof pages 14-19).
7. Function  
   SGK1 plays an extensive role in regulating a variety of cellular functions due to its capacity to phosphorylate many different substrates. A central function of SGK1 is the regulation of ion channels and transporters. For instance, SGK1 enhances epithelial sodium transport by phosphorylating the E3 ubiquitin ligase NEDD4L; this phosphorylation promotes binding with 14-3-3 proteins, thereby preventing NEDD4L-mediated degradation of the ENaC subunit SCNN1A and resulting in increased sodium reabsorption (cicenas2022sgk1incancer pages 1-3, maestro2020serumandglucocorticoidinduced pages 6-7). In addition to modulating ion transport, SGK1 affects the activity and plasma membrane expression of several other channels and transporters such as voltage-gated sodium channels (SCN5A), potassium channels (e.g., KCNJ1/ROMK1, members of the KCNA and KCNQ families), epithelial calcium channels TRPV5/6, chloride channels (including CFTR), glutamate transporters, amino acid transporters, and even the creatine transporter (cicenas2022sgk1incancer pages 1-3, cicenas2022sgk1incancer pages 3-5). Beyond its role in electrolyte homeostasis, SGK1 phosphorylates transcription factors including FOXO1 and FOXO3, leading to their nuclear export and attenuation of apoptosis, while also phosphorylating MDM2 and influencing p53 turnover, which ties into its role in cell survival and proliferation (cicenas2022sgk1incancer pages 8-9, sang2021sgk1inhuman pages 13-14). Furthermore, SGK1 regulates metabolic processes such as glucose transport—by phosphorylating and thereby enhancing the activity of GLUT4—and contributes to insulin-dependent salt sensitivity and peripheral glucose uptake (cicenas2022sgk1incancer pages 3-5, zhou2021serumandglucocorticoidinduced pages 3-5). In neuronal cells, SGK1 phosphorylates MAPT/TAU, affecting microtubule dynamics and neurite outgrowth which is important in memory consolidation (cicenas2022sgk1incancer pages 1-3, lang2020theenigmaticrole pages 14-15). SGK1 also plays a pivotal role in vascular remodeling during angiogenesis and contributes to cellular stress responses such as the modulation of the endoplasmic reticulum stress response and autophagy (jang2022serumandglucocorticoidregulated pages 16-17, maestro2020serumandglucocorticoidinduced pages 8-10).
8. Other Comments  
   Due to its broad substrate range and central role in various signaling pathways, SGK1 is implicated in a number of disease states. Elevated SGK1 levels and sustained kinase activity have been associated with hypertension, diabetic nephropathy, cardiac hypertrophy, and a spectrum of cancers including colorectal, lung, and prostate cancer. Its influence on drug resistance has been documented in the context of certain malignancies, making it a promising diagnostic biomarker and therapeutic target (cicenas2022sgk1incancer pages 5-6, sang2021sgk1inhuman pages 4-6). A number of small-molecule inhibitors targeting SGK1 have been developed in preclinical settings; for example, SI113 and GSK650394 have demonstrated potential in reducing tumor cell proliferation and reversing chemoresistance, although none have yet reached clinical approval owing in part to challenges with kinome selectivity and inhibitor potency (jang2022serumandglucocorticoidregulated pages 13-14, nahar2023theroleof pages 19-23). In addition, natural compounds such as herbacetin have shown selective SGK1 inhibitory properties with beneficial effects in models of cardiac hypertrophy. Ongoing research continues to expand our understanding of SGK1 regulation by noncoding RNAs, its mutational landscape in tumors, and its interplay with pathways such as PI3K/AKT and mTOR. Given its central role in critical biological processes, SGK1 remains a high-priority target for the development of novel therapeutic agents aimed at conditions ranging from metabolic disorders to advanced cancers (sang2021sgk1inhuman pages 14-14, maestro2020serumandglucocorticoidinduced pages 13-14).
9. References  
   cicenas2022sgk1incancer pages 1-3; cicenas2022sgk1incancer pages 3-5; cicenas2022sgk1incancer pages 8-9; cicenas2022sgk1incancer pages 9-10; jang2022serumandglucocorticoidregulated pages 1-3; jang2022serumandglucocorticoidregulated pages 3-4; jang2022serumandglucocorticoidregulated pages 4-5; jang2022serumandglucocorticoidregulated pages 13-14; jang2022serumandglucocorticoidregulated pages 14-15; jang2022serumandglucocorticoidregulated pages 16-17; jang2022serumandglucocorticoidregulated pages 17-17; jang2022serumandglucocorticoidregulated pages 5-6; jang2022serumandglucocorticoidregulated pages 6-8; jang2022serumandglucocorticoidregulated pages 8-9; jang2022serumandglucocorticoidregulated pages 9-11; lang2020theenigmaticrole pages 1-2; lang2020theenigmaticrole pages 2-3; lang2020theenigmaticrole pages 14-14; lang2020theenigmaticrole pages 14-15; lu2022sgk1acritical pages 1-2; lu2022sgk1acritical pages 2-4; maestro2020serumandglucocorticoidinduced pages 1-3; maestro2020serumandglucocorticoidinduced pages 3-4; maestro2020serumandglucocorticoidinduced pages 4-6; maestro2020serumandglucocorticoidinduced pages 6-7; maestro2020serumandglucocorticoidinduced pages 7-8; maestro2020serumandglucocorticoidinduced pages 8-10; maestro2020serumandglucocorticoidinduced pages 10-11; maestro2020serumandglucocorticoidinduced pages 11-12; maestro2020serumandglucocorticoidinduced pages 12-13; maestro2020serumandglucocorticoidinduced pages 13-14; nahar2023theroleof pages 14-19; nahar2023theroleof pages 19-23; sang2021sgk1inhuman pages 1-2; sang2021sgk1inhuman pages 3-4; sang2021sgk1inhuman pages 4-6; sang2021sgk1inhuman pages 6-7; sang2021sgk1inhuman pages 9-11; sang2021sgk1inhuman pages 11-12; sang2021sgk1inhuman pages 12-13; sang2021sgk1inhuman pages 13-14; sang2021sgk1inhuman pages 14-14; voelkl2018sgk1inducesvascular pages 12-13; zhou2021serumandglucocorticoidinduced pages 3-5; zhou2021serumandglucocorticoidinduced pages 10-11; OpenTargets Search: -SGK1.

References

1. (cicenas2022sgk1incancer pages 1-3): Jonas Cicenas, Edita Meskinyte-Kausiliene, Vigilijus Jukna, Arnas Rimkus, Jokubas Simkus, and Diana Soderholm. Sgk1 in cancer: biomarker and drug target. Cancers, 14:2385, May 2022. URL: https://doi.org/10.3390/cancers14102385, doi:10.3390/cancers14102385. This article has 25 citations and is from a peer-reviewed journal.
2. (cicenas2022sgk1incancer pages 5-6): Jonas Cicenas, Edita Meskinyte-Kausiliene, Vigilijus Jukna, Arnas Rimkus, Jokubas Simkus, and Diana Soderholm. Sgk1 in cancer: biomarker and drug target. Cancers, 14:2385, May 2022. URL: https://doi.org/10.3390/cancers14102385, doi:10.3390/cancers14102385. This article has 25 citations and is from a peer-reviewed journal.
3. (cicenas2022sgk1incancer pages 8-9): Jonas Cicenas, Edita Meskinyte-Kausiliene, Vigilijus Jukna, Arnas Rimkus, Jokubas Simkus, and Diana Soderholm. Sgk1 in cancer: biomarker and drug target. Cancers, 14:2385, May 2022. URL: https://doi.org/10.3390/cancers14102385, doi:10.3390/cancers14102385. This article has 25 citations and is from a peer-reviewed journal.
4. (cicenas2022sgk1incancer pages 9-10): Jonas Cicenas, Edita Meskinyte-Kausiliene, Vigilijus Jukna, Arnas Rimkus, Jokubas Simkus, and Diana Soderholm. Sgk1 in cancer: biomarker and drug target. Cancers, 14:2385, May 2022. URL: https://doi.org/10.3390/cancers14102385, doi:10.3390/cancers14102385. This article has 25 citations and is from a peer-reviewed journal.
5. (jang2022serumandglucocorticoidregulated pages 1-3): Hyunsoo Jang, Youngjun Park, and Jaebong Jang. Serum and glucocorticoid-regulated kinase 1: structure, biological functions, and its inhibitors. Frontiers in Pharmacology, Nov 2022. URL: https://doi.org/10.3389/fphar.2022.1036844, doi:10.3389/fphar.2022.1036844. This article has 27 citations and is from a peer-reviewed journal.
6. (jang2022serumandglucocorticoidregulated pages 3-4): Hyunsoo Jang, Youngjun Park, and Jaebong Jang. Serum and glucocorticoid-regulated kinase 1: structure, biological functions, and its inhibitors. Frontiers in Pharmacology, Nov 2022. URL: https://doi.org/10.3389/fphar.2022.1036844, doi:10.3389/fphar.2022.1036844. This article has 27 citations and is from a peer-reviewed journal.
7. (jang2022serumandglucocorticoidregulated pages 4-5): Hyunsoo Jang, Youngjun Park, and Jaebong Jang. Serum and glucocorticoid-regulated kinase 1: structure, biological functions, and its inhibitors. Frontiers in Pharmacology, Nov 2022. URL: https://doi.org/10.3389/fphar.2022.1036844, doi:10.3389/fphar.2022.1036844. This article has 27 citations and is from a peer-reviewed journal.
8. (lang2020theenigmaticrole pages 1-2): Florian Lang, Janet Rajaxavier, Yogesh Singh, Sara Y. Brucker, and Madhuri S. Salker. The enigmatic role of serum & glucocorticoid inducible kinase 1 in the endometrium. Frontiers in Cell and Developmental Biology, Oct 2020. URL: https://doi.org/10.3389/fcell.2020.556543, doi:10.3389/fcell.2020.556543. This article has 10 citations and is from a peer-reviewed journal.
9. (lang2020theenigmaticrole pages 14-14): Florian Lang, Janet Rajaxavier, Yogesh Singh, Sara Y. Brucker, and Madhuri S. Salker. The enigmatic role of serum & glucocorticoid inducible kinase 1 in the endometrium. Frontiers in Cell and Developmental Biology, Oct 2020. URL: https://doi.org/10.3389/fcell.2020.556543, doi:10.3389/fcell.2020.556543. This article has 10 citations and is from a peer-reviewed journal.
10. (lang2020theenigmaticrole pages 14-15): Florian Lang, Janet Rajaxavier, Yogesh Singh, Sara Y. Brucker, and Madhuri S. Salker. The enigmatic role of serum & glucocorticoid inducible kinase 1 in the endometrium. Frontiers in Cell and Developmental Biology, Oct 2020. URL: https://doi.org/10.3389/fcell.2020.556543, doi:10.3389/fcell.2020.556543. This article has 10 citations and is from a peer-reviewed journal.
11. (lang2020theenigmaticrole pages 2-3): Florian Lang, Janet Rajaxavier, Yogesh Singh, Sara Y. Brucker, and Madhuri S. Salker. The enigmatic role of serum & glucocorticoid inducible kinase 1 in the endometrium. Frontiers in Cell and Developmental Biology, Oct 2020. URL: https://doi.org/10.3389/fcell.2020.556543, doi:10.3389/fcell.2020.556543. This article has 10 citations and is from a peer-reviewed journal.
12. (lu2022sgk1acritical pages 2-4): Run-qing Lu, Yin-yin Zhang, Hai-qiu Zhao, Rong-qun Guo, Zhong-xing Jiang, and Rong Guo. Sgk1, a critical regulator of immune modulation and fibrosis and a potential therapeutic target in chronic graft-versus-host disease. Frontiers in Immunology, Feb 2022. URL: https://doi.org/10.3389/fimmu.2022.822303, doi:10.3389/fimmu.2022.822303. This article has 24 citations and is from a peer-reviewed journal.
13. (maestro2020serumandglucocorticoidinduced pages 3-4): Inés Maestro, Patricia Boya, and Ana Martinez. Serum- and glucocorticoid-induced kinase 1, a new therapeutic target for autophagy modulation in chronic diseases. Expert Opinion on Therapeutic Targets, 24:231-243, Feb 2020. URL: https://doi.org/10.1080/14728222.2020.1730328, doi:10.1080/14728222.2020.1730328. This article has 23 citations and is from a peer-reviewed journal.
14. (maestro2020serumandglucocorticoidinduced pages 4-6): Inés Maestro, Patricia Boya, and Ana Martinez. Serum- and glucocorticoid-induced kinase 1, a new therapeutic target for autophagy modulation in chronic diseases. Expert Opinion on Therapeutic Targets, 24:231-243, Feb 2020. URL: https://doi.org/10.1080/14728222.2020.1730328, doi:10.1080/14728222.2020.1730328. This article has 23 citations and is from a peer-reviewed journal.
15. (nahar2023theroleof pages 14-19): Lutfun Nahar. The role of serum-glucocorticoid-regulated kinase (sgk1) in arterial reactivity. 2023. URL: https://doi.org/10.32469/10355/97092, doi:10.32469/10355/97092.
16. (sang2021sgk1inhuman pages 11-12): Yiwen Sang, Piaoping Kong, Shizhen Zhang, Lingyu Zhang, Ying Cao, Xiuzhi Duan, Tao Sun, Zhihua Tao, and Weiwei Liu. Sgk1 in human cancer: emerging roles and mechanisms. Frontiers in Oncology, Jan 2021. URL: https://doi.org/10.3389/fonc.2020.608722, doi:10.3389/fonc.2020.608722. This article has 82 citations and is from a peer-reviewed journal.
17. (sang2021sgk1inhuman pages 12-13): Yiwen Sang, Piaoping Kong, Shizhen Zhang, Lingyu Zhang, Ying Cao, Xiuzhi Duan, Tao Sun, Zhihua Tao, and Weiwei Liu. Sgk1 in human cancer: emerging roles and mechanisms. Frontiers in Oncology, Jan 2021. URL: https://doi.org/10.3389/fonc.2020.608722, doi:10.3389/fonc.2020.608722. This article has 82 citations and is from a peer-reviewed journal.
18. (sang2021sgk1inhuman pages 13-14): Yiwen Sang, Piaoping Kong, Shizhen Zhang, Lingyu Zhang, Ying Cao, Xiuzhi Duan, Tao Sun, Zhihua Tao, and Weiwei Liu. Sgk1 in human cancer: emerging roles and mechanisms. Frontiers in Oncology, Jan 2021. URL: https://doi.org/10.3389/fonc.2020.608722, doi:10.3389/fonc.2020.608722. This article has 82 citations and is from a peer-reviewed journal.
19. (sang2021sgk1inhuman pages 14-14): Yiwen Sang, Piaoping Kong, Shizhen Zhang, Lingyu Zhang, Ying Cao, Xiuzhi Duan, Tao Sun, Zhihua Tao, and Weiwei Liu. Sgk1 in human cancer: emerging roles and mechanisms. Frontiers in Oncology, Jan 2021. URL: https://doi.org/10.3389/fonc.2020.608722, doi:10.3389/fonc.2020.608722. This article has 82 citations and is from a peer-reviewed journal.
20. (OpenTargets Search: -SGK1): Open Targets Query (-SGK1, 5 results). Ochoa, D. et al. (2023). The next-generation Open Targets Platform: reimagined, redesigned, rebuilt. Nucleic Acids Research.
21. (cicenas2022sgk1incancer pages 3-5): Jonas Cicenas, Edita Meskinyte-Kausiliene, Vigilijus Jukna, Arnas Rimkus, Jokubas Simkus, and Diana Soderholm. Sgk1 in cancer: biomarker and drug target. Cancers, 14:2385, May 2022. URL: https://doi.org/10.3390/cancers14102385, doi:10.3390/cancers14102385. This article has 25 citations and is from a peer-reviewed journal.
22. (jang2022serumandglucocorticoidregulated pages 13-14): Hyunsoo Jang, Youngjun Park, and Jaebong Jang. Serum and glucocorticoid-regulated kinase 1: structure, biological functions, and its inhibitors. Frontiers in Pharmacology, Nov 2022. URL: https://doi.org/10.3389/fphar.2022.1036844, doi:10.3389/fphar.2022.1036844. This article has 27 citations and is from a peer-reviewed journal.
23. (jang2022serumandglucocorticoidregulated pages 14-15): Hyunsoo Jang, Youngjun Park, and Jaebong Jang. Serum and glucocorticoid-regulated kinase 1: structure, biological functions, and its inhibitors. Frontiers in Pharmacology, Nov 2022. URL: https://doi.org/10.3389/fphar.2022.1036844, doi:10.3389/fphar.2022.1036844. This article has 27 citations and is from a peer-reviewed journal.
24. (jang2022serumandglucocorticoidregulated pages 16-17): Hyunsoo Jang, Youngjun Park, and Jaebong Jang. Serum and glucocorticoid-regulated kinase 1: structure, biological functions, and its inhibitors. Frontiers in Pharmacology, Nov 2022. URL: https://doi.org/10.3389/fphar.2022.1036844, doi:10.3389/fphar.2022.1036844. This article has 27 citations and is from a peer-reviewed journal.
25. (jang2022serumandglucocorticoidregulated pages 17-17): Hyunsoo Jang, Youngjun Park, and Jaebong Jang. Serum and glucocorticoid-regulated kinase 1: structure, biological functions, and its inhibitors. Frontiers in Pharmacology, Nov 2022. URL: https://doi.org/10.3389/fphar.2022.1036844, doi:10.3389/fphar.2022.1036844. This article has 27 citations and is from a peer-reviewed journal.
26. (jang2022serumandglucocorticoidregulated pages 5-6): Hyunsoo Jang, Youngjun Park, and Jaebong Jang. Serum and glucocorticoid-regulated kinase 1: structure, biological functions, and its inhibitors. Frontiers in Pharmacology, Nov 2022. URL: https://doi.org/10.3389/fphar.2022.1036844, doi:10.3389/fphar.2022.1036844. This article has 27 citations and is from a peer-reviewed journal.
27. (jang2022serumandglucocorticoidregulated pages 6-8): Hyunsoo Jang, Youngjun Park, and Jaebong Jang. Serum and glucocorticoid-regulated kinase 1: structure, biological functions, and its inhibitors. Frontiers in Pharmacology, Nov 2022. URL: https://doi.org/10.3389/fphar.2022.1036844, doi:10.3389/fphar.2022.1036844. This article has 27 citations and is from a peer-reviewed journal.
28. (jang2022serumandglucocorticoidregulated pages 8-9): Hyunsoo Jang, Youngjun Park, and Jaebong Jang. Serum and glucocorticoid-regulated kinase 1: structure, biological functions, and its inhibitors. Frontiers in Pharmacology, Nov 2022. URL: https://doi.org/10.3389/fphar.2022.1036844, doi:10.3389/fphar.2022.1036844. This article has 27 citations and is from a peer-reviewed journal.
29. (jang2022serumandglucocorticoidregulated pages 9-11): Hyunsoo Jang, Youngjun Park, and Jaebong Jang. Serum and glucocorticoid-regulated kinase 1: structure, biological functions, and its inhibitors. Frontiers in Pharmacology, Nov 2022. URL: https://doi.org/10.3389/fphar.2022.1036844, doi:10.3389/fphar.2022.1036844. This article has 27 citations and is from a peer-reviewed journal.
30. (lu2022sgk1acritical pages 1-2): Run-qing Lu, Yin-yin Zhang, Hai-qiu Zhao, Rong-qun Guo, Zhong-xing Jiang, and Rong Guo. Sgk1, a critical regulator of immune modulation and fibrosis and a potential therapeutic target in chronic graft-versus-host disease. Frontiers in Immunology, Feb 2022. URL: https://doi.org/10.3389/fimmu.2022.822303, doi:10.3389/fimmu.2022.822303. This article has 24 citations and is from a peer-reviewed journal.
31. (maestro2020serumandglucocorticoidinduced pages 1-3): Inés Maestro, Patricia Boya, and Ana Martinez. Serum- and glucocorticoid-induced kinase 1, a new therapeutic target for autophagy modulation in chronic diseases. Expert Opinion on Therapeutic Targets, 24:231-243, Feb 2020. URL: https://doi.org/10.1080/14728222.2020.1730328, doi:10.1080/14728222.2020.1730328. This article has 23 citations and is from a peer-reviewed journal.
32. (maestro2020serumandglucocorticoidinduced pages 10-11): Inés Maestro, Patricia Boya, and Ana Martinez. Serum- and glucocorticoid-induced kinase 1, a new therapeutic target for autophagy modulation in chronic diseases. Expert Opinion on Therapeutic Targets, 24:231-243, Feb 2020. URL: https://doi.org/10.1080/14728222.2020.1730328, doi:10.1080/14728222.2020.1730328. This article has 23 citations and is from a peer-reviewed journal.
33. (maestro2020serumandglucocorticoidinduced pages 11-12): Inés Maestro, Patricia Boya, and Ana Martinez. Serum- and glucocorticoid-induced kinase 1, a new therapeutic target for autophagy modulation in chronic diseases. Expert Opinion on Therapeutic Targets, 24:231-243, Feb 2020. URL: https://doi.org/10.1080/14728222.2020.1730328, doi:10.1080/14728222.2020.1730328. This article has 23 citations and is from a peer-reviewed journal.
34. (maestro2020serumandglucocorticoidinduced pages 12-13): Inés Maestro, Patricia Boya, and Ana Martinez. Serum- and glucocorticoid-induced kinase 1, a new therapeutic target for autophagy modulation in chronic diseases. Expert Opinion on Therapeutic Targets, 24:231-243, Feb 2020. URL: https://doi.org/10.1080/14728222.2020.1730328, doi:10.1080/14728222.2020.1730328. This article has 23 citations and is from a peer-reviewed journal.
35. (maestro2020serumandglucocorticoidinduced pages 13-14): Inés Maestro, Patricia Boya, and Ana Martinez. Serum- and glucocorticoid-induced kinase 1, a new therapeutic target for autophagy modulation in chronic diseases. Expert Opinion on Therapeutic Targets, 24:231-243, Feb 2020. URL: https://doi.org/10.1080/14728222.2020.1730328, doi:10.1080/14728222.2020.1730328. This article has 23 citations and is from a peer-reviewed journal.
36. (maestro2020serumandglucocorticoidinduced pages 6-7): Inés Maestro, Patricia Boya, and Ana Martinez. Serum- and glucocorticoid-induced kinase 1, a new therapeutic target for autophagy modulation in chronic diseases. Expert Opinion on Therapeutic Targets, 24:231-243, Feb 2020. URL: https://doi.org/10.1080/14728222.2020.1730328, doi:10.1080/14728222.2020.1730328. This article has 23 citations and is from a peer-reviewed journal.
37. (maestro2020serumandglucocorticoidinduced pages 7-8): Inés Maestro, Patricia Boya, and Ana Martinez. Serum- and glucocorticoid-induced kinase 1, a new therapeutic target for autophagy modulation in chronic diseases. Expert Opinion on Therapeutic Targets, 24:231-243, Feb 2020. URL: https://doi.org/10.1080/14728222.2020.1730328, doi:10.1080/14728222.2020.1730328. This article has 23 citations and is from a peer-reviewed journal.
38. (maestro2020serumandglucocorticoidinduced pages 8-10): Inés Maestro, Patricia Boya, and Ana Martinez. Serum- and glucocorticoid-induced kinase 1, a new therapeutic target for autophagy modulation in chronic diseases. Expert Opinion on Therapeutic Targets, 24:231-243, Feb 2020. URL: https://doi.org/10.1080/14728222.2020.1730328, doi:10.1080/14728222.2020.1730328. This article has 23 citations and is from a peer-reviewed journal.
39. (nahar2023theroleof pages 19-23): Lutfun Nahar. The role of serum-glucocorticoid-regulated kinase (sgk1) in arterial reactivity. 2023. URL: https://doi.org/10.32469/10355/97092, doi:10.32469/10355/97092.
40. (sang2021sgk1inhuman pages 1-2): Yiwen Sang, Piaoping Kong, Shizhen Zhang, Lingyu Zhang, Ying Cao, Xiuzhi Duan, Tao Sun, Zhihua Tao, and Weiwei Liu. Sgk1 in human cancer: emerging roles and mechanisms. Frontiers in Oncology, Jan 2021. URL: https://doi.org/10.3389/fonc.2020.608722, doi:10.3389/fonc.2020.608722. This article has 82 citations and is from a peer-reviewed journal.
41. (sang2021sgk1inhuman pages 3-4): Yiwen Sang, Piaoping Kong, Shizhen Zhang, Lingyu Zhang, Ying Cao, Xiuzhi Duan, Tao Sun, Zhihua Tao, and Weiwei Liu. Sgk1 in human cancer: emerging roles and mechanisms. Frontiers in Oncology, Jan 2021. URL: https://doi.org/10.3389/fonc.2020.608722, doi:10.3389/fonc.2020.608722. This article has 82 citations and is from a peer-reviewed journal.
42. (sang2021sgk1inhuman pages 4-6): Yiwen Sang, Piaoping Kong, Shizhen Zhang, Lingyu Zhang, Ying Cao, Xiuzhi Duan, Tao Sun, Zhihua Tao, and Weiwei Liu. Sgk1 in human cancer: emerging roles and mechanisms. Frontiers in Oncology, Jan 2021. URL: https://doi.org/10.3389/fonc.2020.608722, doi:10.3389/fonc.2020.608722. This article has 82 citations and is from a peer-reviewed journal.
43. (sang2021sgk1inhuman pages 6-7): Yiwen Sang, Piaoping Kong, Shizhen Zhang, Lingyu Zhang, Ying Cao, Xiuzhi Duan, Tao Sun, Zhihua Tao, and Weiwei Liu. Sgk1 in human cancer: emerging roles and mechanisms. Frontiers in Oncology, Jan 2021. URL: https://doi.org/10.3389/fonc.2020.608722, doi:10.3389/fonc.2020.608722. This article has 82 citations and is from a peer-reviewed journal.
44. (sang2021sgk1inhuman pages 9-11): Yiwen Sang, Piaoping Kong, Shizhen Zhang, Lingyu Zhang, Ying Cao, Xiuzhi Duan, Tao Sun, Zhihua Tao, and Weiwei Liu. Sgk1 in human cancer: emerging roles and mechanisms. Frontiers in Oncology, Jan 2021. URL: https://doi.org/10.3389/fonc.2020.608722, doi:10.3389/fonc.2020.608722. This article has 82 citations and is from a peer-reviewed journal.
45. (voelkl2018sgk1inducesvascular pages 12-13): Jakob Voelkl, Trang T.D. Luong, Rashad Tuffaha, Katharina Musculus, Tilman Auer, Xiaoming Lian, Christoph Daniel, Daniel Zickler, Beate Boehme, Michael Sacherer, Bernhard Metzler, Dietmar Kuhl, Maik Gollasch, Kerstin Amann, Dominik N. Müller, Burkert Pieske, Florian Lang, and Ioana Alesutan. Sgk1 induces vascular smooth muscle cell calcification through nf-κb signaling. Journal of Clinical Investigation, 128:3024-3040, Jun 2018. URL: https://doi.org/10.1172/jci96477, doi:10.1172/jci96477. This article has 159 citations and is from a highest quality peer-reviewed journal.
46. (zhou2021serumandglucocorticoidinduced pages 10-11): Ben Zhou, Yuyao Zhang, Sainan Li, Lianfeng Wu, Geza Fejes-Toth, Aniko Naray-Fejes-Toth, and Alexander A. Soukas. Serum- and glucocorticoid-induced kinase drives hepatic insulin resistance by directly inhibiting amp-activated protein kinase. Cell Reports, 37:109785, Oct 2021. URL: https://doi.org/10.1016/j.celrep.2021.109785, doi:10.1016/j.celrep.2021.109785. This article has 22 citations and is from a highest quality peer-reviewed journal.
47. (zhou2021serumandglucocorticoidinduced pages 3-5): Ben Zhou, Yuyao Zhang, Sainan Li, Lianfeng Wu, Geza Fejes-Toth, Aniko Naray-Fejes-Toth, and Alexander A. Soukas. Serum- and glucocorticoid-induced kinase drives hepatic insulin resistance by directly inhibiting amp-activated protein kinase. Cell Reports, 37:109785, Oct 2021. URL: https://doi.org/10.1016/j.celrep.2021.109785, doi:10.1016/j.celrep.2021.109785. This article has 22 citations and is from a highest quality peer-reviewed journal.