

CSNK2A2 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP8130b**Specification**

CSNK2A2 Antibody (C-term) Blocking Peptide - Product InformationPrimary Accession [P19784](#)**CSNK2A2 Antibody (C-term) Blocking Peptide - Additional Information****Gene ID** 1459**Other Names**

Casein kinase II subunit alpha', CK II alpha', CSNK2A2, CK2A2

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP8130b](/product/products/AP8130b) was selected from the C-term region of human CSNK2A2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

CSNK2A2 Antibody (C-term) Blocking Peptide - Protein Information**Name** CSNK2A2**Synonyms** CK2A2**Function**

Catalytic subunit of a constitutively active serine/threonine-protein kinase complex that phosphorylates a large number of substrates containing acidic residues C-terminal to the phosphorylated serine or threonine (PubMed: [11239457](http://www.uniprot.org/citations/11239457), PubMed: [11704824](http://www.uniprot.org/citations/11704824), PubMed: [16193064](http://www.uniprot.org/citations/16193064), PubMed: [30898438](http://www.uniprot.org/citations/30898438)). Regulates numerous cellular processes, such as cell cycle progression, apoptosis and transcription, as well as viral infection (PubMed: [11704824](http://www.uniprot.org/citations/11704824), PubMed: [16193064](http://www.uniprot.org/citations/16193064), PubMed: [30898438](http://www.uniprot.org/citations/30898438)).

[30898438](http://www.uniprot.org/citations/30898438)). May act as a regulatory node which integrates and coordinates numerous signals leading to an appropriate cellular response (PubMed: [12631575](http://www.uniprot.org/citations/12631575), PubMed: [19387552](http://www.uniprot.org/citations/19387552), PubMed: [19387551](http://www.uniprot.org/citations/19387551)). During mitosis, functions as a component of the p53/TP53-dependent spindle assembly checkpoint (SAC) that maintains cyclin-B-CDK1 activity and G2 arrest in response to spindle damage (PubMed: [12631575](http://www.uniprot.org/citations/12631575), PubMed: [19387552](http://www.uniprot.org/citations/19387552), PubMed: [19387551](http://www.uniprot.org/citations/19387551)). Also required for p53/TP53-mediated apoptosis, phosphorylating 'Ser-392' of p53/TP53 following UV irradiation (PubMed: [11239457](http://www.uniprot.org/citations/11239457)). Phosphorylates a number of DNA repair proteins in response to DNA damage, such as MDC1, RAD9A, RAD51 and HTATSF1, promoting their recruitment to DNA damage sites (PubMed: [20545769](http://www.uniprot.org/citations/20545769), PubMed: [21482717](http://www.uniprot.org/citations/21482717), PubMed: [22325354](http://www.uniprot.org/citations/22325354), PubMed: [26811421](http://www.uniprot.org/citations/26811421), PubMed: [30898438](http://www.uniprot.org/citations/30898438), PubMed: [35597237](http://www.uniprot.org/citations/35597237)). Can also negatively regulate apoptosis (PubMed: [19387552](http://www.uniprot.org/citations/19387552), PubMed: [19387551](http://www.uniprot.org/citations/19387551)). Phosphorylates the caspases CASP9 and CASP2 and the apoptotic regulator NOL3 (PubMed: [12631575](http://www.uniprot.org/citations/12631575), PubMed: [19387552](http://www.uniprot.org/citations/19387552), PubMed: [19387551](http://www.uniprot.org/citations/19387551)). Phosphorylation protects CASP9 from cleavage and activation by CASP8, and inhibits the dimerization of CASP2 and activation of CASP8 (PubMed: [12631575](http://www.uniprot.org/citations/12631575), PubMed: [19387552](http://www.uniprot.org/citations/19387552), PubMed: [19387551](http://www.uniprot.org/citations/19387551)). Regulates transcription by direct phosphorylation of RNA polymerases I, II, III and IV (PubMed: [12631575](http://www.uniprot.org/citations/12631575), PubMed: [19387552](http://www.uniprot.org/citations/19387552), PubMed: [19387551](http://www.uniprot.org/citations/19387551)). Also phosphorylates and regulates numerous transcription factors including NF-kappa-B, STAT1, CREB1, IRF1, IRF2, ATF1, SRF, MAX, JUN, FOS, MYC and MYB (PubMed: [12631575](http://www.uniprot.org/citations/12631575), PubMed: [19387552](http://www.uniprot.org/citations/19387552), PubMed: [19387551](http://www.uniprot.org/citations/19387551)). Phosphorylates Hsp90 and its co-chaperones FKBP4 and CDC37, which is essential for chaperone function (PubMed: [19387550](http://www.uniprot.org/citations/19387550)). Regulates Wnt signaling by phosphorylating CTNNB1 and the transcription factor LEF1 (PubMed: [19387549](http://www.uniprot.org/citations/19387549)). Acts as an ectokinase that phosphorylates several extracellular proteins (PubMed: [12631575](http://www.uniprot.org/citations/12631575), PubMed: [19387552](http://www.uniprot.org/citations/19387552), PubMed: [19387551](http://www.uniprot.org/citations/19387551)). During viral infection, phosphorylates various proteins involved in the viral life cycles of EBV, HSV, HBV, HCV, HIV, CMV and HPV (PubMed: [12631575](http://www.uniprot.org/citations/12631575), PubMed: [19387552](http://www.uniprot.org/citations/19387552), PubMed: [19387551](http://www.uniprot.org/citations/19387551)).

Cellular Location

Nucleus {ECO:0000250|UniProtKB:O54833}. Cytoplasm {ECO:0000250|UniProtKB:O54833}.

Note=Interaction with SIRT6 prevents translocation into the nucleus.
{ECO:0000250|UniProtKB:O54833}

CSNK2A2 Antibody (C-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

CSNK2A2 Antibody (C-term) Blocking Peptide - Images

CSNK2A2 Antibody (C-term) Blocking Peptide - Background

Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the γ phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains. The AGC kinase group consists of 63 kinases including the cyclic nucleotide-regulated protein kinase (PKA & PKG) family, the diacylglycerol-activated/phospholipid-dependent protein kinase C (PKC) family, the related to PKA and PKC (RAC/Akt) protein kinase family, the kinases that phosphorylate G protein-coupled receptors family (ARK), and the kinases that phosphorylate ribosomal protein S6 family (RSK).

CSNK2A2 Antibody (C-term) Blocking Peptide - References

Szebeni, A., et al., J. Biol. Chem. 278(11):9107-9115 (2003). Humrich, J., et al., J. Biol. Chem. 278(7):4474-4481 (2003). Faust, M., et al., Cell. Mol. Life Sci. 59(12):2155-2164 (2002). Homma, M.K., et al., Proc. Natl. Acad. Sci. U.S.A. 99(9):5959-5964 (2002). Skjerpen, C.S., et al., EMBO J. 21(15):4058-4069 (2002).