

CSNK2A1 Rabbit mAb
Catalog # AP76452

Specification

CSNK2A1 Rabbit mAb - Product Information

Application	WB
Primary Accession	P68400
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	45144

CSNK2A1 Rabbit mAb - Additional Information

Gene ID 1457

Other Names
CSNK2A1

Dilution
WB~~1/500-1/1000

Format
Liquid

CSNK2A1 Rabbit mAb - Protein Information

Name CSNK2A1

Synonyms CK2A1

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) target="_blank">11239457, PubMed: [11704824](http://www.uniprot.org/citations/11704824) target="_blank">11704824, PubMed: [16193064](http://www.uniprot.org/citations/16193064) target="_blank">16193064, PubMed: [18411307](http://www.uniprot.org/citations/18411307) target="_blank">18411307, PubMed: [18583988](http://www.uniprot.org/citations/18583988) target="_blank">18583988, PubMed: [18678890](http://www.uniprot.org/citations/18678890) target="_blank">18678890, PubMed: [19188443](http://www.uniprot.org/citations/19188443) target="_blank">19188443, PubMed: [20545769](http://www.uniprot.org/citations/20545769) target="_blank">20545769, PubMed: [20625391](http://www.uniprot.org/citations/20625391) target="_blank">20625391, PubMed: [22017874](http://www.uniprot.org/citations/22017874) target="_blank">22017874, PubMed: [22406621](http://www.uniprot.org/citations/22406621) target="_blank">22406621, PubMed: [24962073](http://www.uniprot.org/citations/24962073) target="_blank">24962073, PubMed: [30898438](http://www.uniprot.org/citations/30898438) target="_blank">30898438, PubMed: [31439799](http://www.uniprot.org/citations/31439799) target="_blank">31439799

target="_blank">31439799). Regulates numerous cellular processes, such as cell cycle progression, apoptosis and transcription, as well as viral infection (PubMed:12631575, PubMed:19387551, PubMed:19387552). May act as a regulatory node which integrates and coordinates numerous signals leading to an appropriate cellular response (PubMed:12631575, PubMed:19387551, PubMed:19387552). 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:11704824, PubMed:19188443). Also required for p53/TP53-mediated apoptosis, phosphorylating 'Ser-392' of p53/TP53 following UV irradiation (PubMed:11239457). Phosphorylates a number of DNA repair proteins in response to DNA damage, such as MDC1, MRE11, RAD9A, RAD51 and HTATSF1, promoting their recruitment to DNA damage sites (PubMed:18411307, PubMed:18583988, PubMed:18678890, PubMed:20545769, PubMed:21482717, PubMed:22325354, PubMed:26811421, PubMed:28512243, PubMed:30898438, PubMed:35597237). Can also negatively regulate apoptosis (PubMed:16193064, PubMed:22184066). Phosphorylates the caspases CASP9 and CASP2 and the apoptotic regulator NOL3 (PubMed:16193064). Phosphorylation protects CASP9 from cleavage and activation by CASP8, and inhibits the dimerization of CASP2 and activation of CASP8 (PubMed:16193064). Phosphorylates YY1, protecting YY1 from cleavage by CASP7 during apoptosis (PubMed:22184066). Regulates transcription by direct phosphorylation of RNA polymerases I, II, III and IV (PubMed:12631575, PubMed:19387550, PubMed:19387551, PubMed:19387552, PubMed:23123191). Also phosphorylates and regulates numerous transcription factors including NF-kappa-B, STAT1, CREB1, IRF1, IRF2, ATF1, ATF4, SRF, MAX, JUN, FOS, MYC and MYB (PubMed:12631575, PubMed:19387550, PubMed:19387551, PubMed:19387552, PubMed:23123191). Phosphorylates Hsp90 and its co-chaperones FKBP4 and CDC37, which is essential for chaperone function (PubMed:19387550). Mediates sequential phosphorylation of FNIP1, promoting its gradual interaction with Hsp90, leading to activate both kinase and non-kinase client proteins of Hsp90 (PubMed:30699359). Regulates Wnt signaling by phosphorylating CTNNB1 and the

transcription factor LEF1 (PubMed:19387549). Acts as an ectokinase that phosphorylates several extracellular proteins (PubMed:12631575, PubMed:19387550, PubMed:19387551, PubMed:19387552). During viral infection, phosphorylates various proteins involved in the viral life cycles of EBV, HSV, HBV, HCV, HIV, CMV and HPV (PubMed:12631575, PubMed:19387550, PubMed:19387551, PubMed:19387552). Phosphorylates PML at 'Ser-565' and primes it for ubiquitin-mediated degradation (PubMed:20625391, PubMed:22406621). Plays an important role in the circadian clock function by phosphorylating BMAL1 at 'Ser-90' which is pivotal for its interaction with CLOCK and which controls CLOCK nuclear entry (By similarity). Phosphorylates CCAR2 at 'Thr-454' in gastric carcinoma tissue (PubMed:24962073). Phosphorylates FMR1, promoting FMR1-dependent formation of a membraneless compartment (PubMed:30765518, PubMed:31439799). May phosphorylate histone H2A on 'Ser-1' (PubMed:38334665).

Cellular Location

Nucleus

Tissue Location

Expressed in gastric carcinoma tissue and the expression gradually increases with the progression of the carcinoma (at protein level).

CSNK2A1 Rabbit mAb - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CSNK2A1 Rabbit mAb - Images



