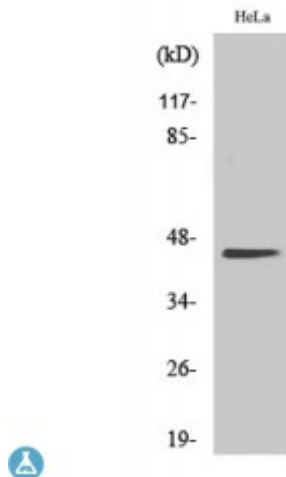


Anti-Casein Kinase I alpha antibody



Description	Rabbit polyclonal to Casein Kinase IIalpha.
Model	STJ92008
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, IHC, WB
Immunogen	Synthesized peptide derived from human Casein Kinase IIalpha around the non-phosphorylation site of Y255.
Immunogen Region	190-270 aa
Gene ID	1457
Gene Symbol	CSNK2A1
Dilution range	WB 1:500-1:2000IHC 1:100-1:300ELISA 1:10000
Specificity	Casein Kinase IIalpha Polyclonal Antibody detects endogenous levels of Casein Kinase IIalpha protein.
Tissue Specificity	Expressed in gastric carcinoma tissue and the expression gradually increases with the progression of the carcinoma (at protein level).
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Casein kinase II subunit alpha CK II alpha
Molecular Weight	45 kDa

Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:24570MIM:115440
Alternative Names	Casein kinase II subunit alpha CK II alpha
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. Regulates numerous cellular processes, such as cell cycle progression, apoptosis and transcription, as well as viral infection. May act as a regulatory node which integrates and coordinates numerous signals leading to an appropriate cellular response. 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. Also required for p53/TP53-mediated apoptosis, phosphorylating 'Ser-392' of p53/TP53 following UV irradiation. Can also negatively regulate apoptosis. Phosphorylates the caspases CASP9 and CASP2 and the apoptotic regulator NOL3. Phosphorylation protects CASP9 from cleavage and activation by CASP8, and inhibits the dimerization of CASP2 and activation of CASP8. Regulates transcription by direct phosphorylation of RNA polymerases I, II, III and IV. Also phosphorylates and regulates numerous transcription factors including NF-kappa-B, STAT1, CREB1, IRF1, IRF2, ATF1, SRF, MAX, JUN, FOS, MYC and MYB. Phosphorylates Hsp90 and its co-chaperones FKBP4 and CDC37, which is essential for chaperone function. Regulates Wnt signaling by phosphorylating CTNNB1 and the transcription factor LEF1. Acts as an ectokinase that phosphorylates several extracellular proteins. During viral infection, phosphorylates various proteins involved in the viral life cycles of EBV, HSV, HBV, HCV, HIV, CMV and HPV. Phosphorylates PML at 'Ser-565' and primes it for ubiquitin-mediated degradation. Plays an important role in the circadian clock function by phosphorylating ARNTL/BMAL1 at 'Ser-90' which is pivotal for its interaction with CLOCK and which controls CLOCK nuclear entry . Phosphorylates CCAR2 at 'Thr-454' in gastric carcinoma tissue .
Cellular Localization	Nucleus
Post-translational Modifications	Phosphorylated at Thr-344, Thr-360, Ser-362 and Ser-370 by CDK1 in prophase and metaphase and dephosphorylated during anaphase. Phosphorylation does not directly affect casein kinase 2 activity, but may contribute to its regulation by forming binding sites for interacting proteins and/or targeting it to different compartments.