Data Sheet (Cat.No.TMAH-00306)

TargetMol

Anti-CK2 alpha/CSNK2A1 Antibody (2J938)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human, Mouse
Conjugation:	Unconjugated
Clone:	2J938
Purification:	Affinity-chromatography

Applications

Verified Activity:	Western Blot -Positive WB detected in: NIH/3T3 whole cell lysate, 293 whole cell lysate, Jurkat whole cell lysate, Hela whole cell lysate, A549 whole cell lysate, U-87 whole cell lysate -All lanes: CKII alpha antibody at 1:1000 -Secondary: Goat polyclonal to rabbit IgG at 1/50000 dilution -Predicted band size: 46, 30 kDa -Observed band size: 45 kDa
Application:	ELISA,WB
Recommended	WB:1:500-1:5000.

Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	A synthetic peptide: Human CKII alpha
Antigen Species:	Human
Gene ID:	1457
Uniprot ID:	P68400
Synonyms:	CSNK2A3;CKII;CK2A1;casein kinase 2, alpha 1 polypeptide;casein kinase 2, α1 polypeptide;CK2 α/CSNK2A1
Biology Area:	Cell biology, Signal transduction

Research Background

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, ATF4, SRF, MAX, JUN, FOS, MYC and MYB. Phosphorylates Hsp90 and its co-chaperones FKBP4 and CDC37, which is essential for chaperone function. Mediates sequential phosphorylation of FNIP1, promoting its gradual interaction with Hsp90, leading to activate both kinase and non-kinase client proteins of Hsp90. 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-

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