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Mouse Csnk2a2 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13804a

Product Information

Application	WB, E
Primary Accession	O54833
Other Accession	P19784, P21869, P20427, NP_034104.1
Reactivity	Human, Mouse
Predicted	Bovine, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB34465
Calculated MW	41215
Antigen Region	4-32

Additional Information

Gene ID	13000
Other Names	Casein kinase II subunit alpha', CK II alpha', Csnk2a2
Target/Specificity	This Mouse Csnk2a2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 4-32 amino acids from the N-terminal region of mouse Csnk2a2.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Mouse Csnk2a2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Csnk2a2
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. 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. 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. May phosphorylate histone H2A on 'Ser-1'.
Cellular Location	Nucleus. Cytoplasm. Note=Interaction with SIRT6 prevents translocation into the nucleus.
Tissue Location	Highly expressed in brain, testis and mature epididymal spermatozoa. Weakly expressed in kidney, liver, lung, spleen and thymus (at protein level).

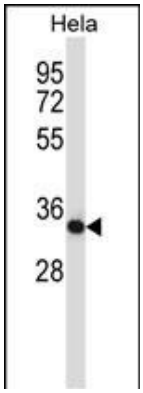
Background

Casein kinases are operationally defined by their preferential utilization of acidic proteins such as caseins as substrates. The alpha and alpha' chains contain the catalytic site. Participates in Wnt signaling. CK2 phosphorylates 'Ser-389' of p53/TP53 following UV irradiation (By similarity).

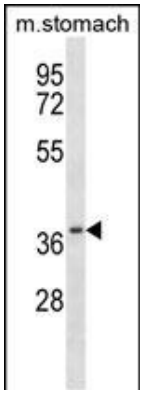
References

Pastori, V., et al. Biochim. Biophys. Acta 1802 (7-8), 583-592 (2010) :
Cobb, L.J., et al. Mol. Endocrinol. 23(10):1624-1633(2009)
Mueller, T., et al. Hum. Mol. Genet. 18(17):3334-3343(2009)
Maier, B., et al. Genes Dev. 23(6):708-718(2009)
Kang, H., et al. PLoS ONE 4 (8), E6611 (2009) :

Images



Mouse Csnk2a2 Antibody (N-term) (Cat. #AP13804a) western blot analysis in Hela cell line lysates (35ug/lane).This demonstrates the Csnk2a2 antibody detected the Csnk2a2 protein (arrow).



Mouse Csnk2a2 Antibody (N-term) (Cat. #AP13804a) western blot analysis in mouse stomach tissue lysates (35ug/lane).This demonstrates the Csnk2a2 antibody detected the Csnk2a2 protein (arrow).