10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-CKII alpha CSNK2A1 Rabbit Monoclonal Antibody

Catalog # ABO14023

Specification

Anti-CKII alpha CSNK2A1 Rabbit Monoclonal Antibody - Product Information

Application	**WB, IHC, FC**
Primary Accession	P68400
Host	**Rabbit**
Isotype	**Rabbit IgG**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Format	**Liquid**

Description
Anti-CKII alpha CSNK2A1 Rabbit Monoclonal Antibody . Tested in WB, IHC, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

Anti-CKII alpha CSNK2A1 Rabbit Monoclonal Antibody - Additional Information

Gene ID 1457

Other Names
Casein kinase II subunit alpha, CK II alpha, 2.7.11.1, CSNK2A1, CK2A1

Calculated MW
45144 MW KDa

Application Details
WB 1:500-1:2000
IHC 1:50-1:200
FC 1:50

Subcellular Localization
Nucleus.

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

Contents
Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen
A synthesized peptide derived from human CKII alpha

Purification
Affinity-chromatography

Storage	**Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated**

freeze-thaw cycles.

Anti-CKII alpha CSNK2A1 Rabbit Monoclonal Antibody - 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, PubMed:11704824, PubMed:16193064, PubMed:18411307, PubMed:18583988, PubMed:18678890, PubMed:19188443, PubMed:20545769, PubMed:20625391, PubMed:22017874, PubMed:22406621, PubMed:24962073, PubMed:30898438, PubMed: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).

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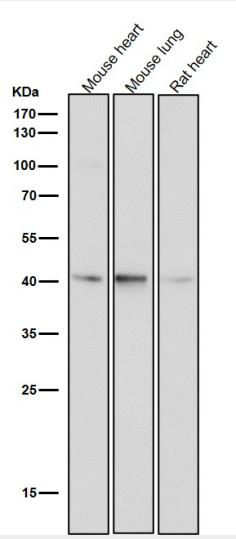
Anti-CKII alpha CSNK2A1 Rabbit Monoclonal Antibody - Protocols

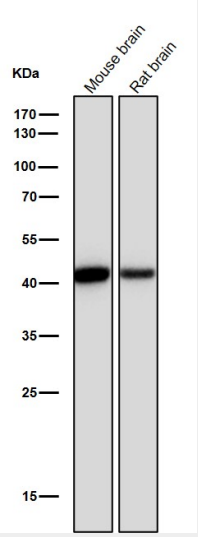
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-CKII alpha CSNK2A1 Rabbit Monoclonal Antibody - Images



All lanes use the Antibody at 1:1K dilution for 1 hour at room temperature.



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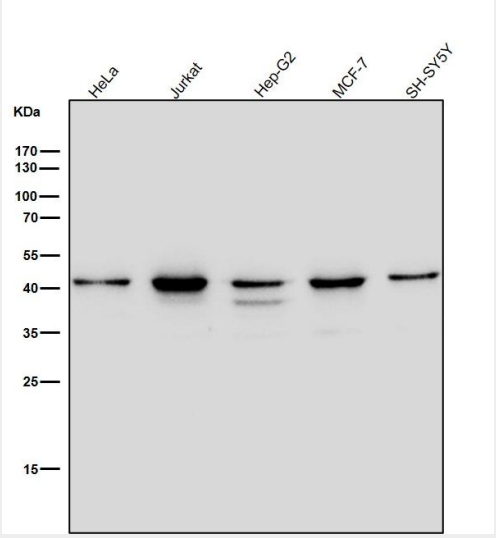

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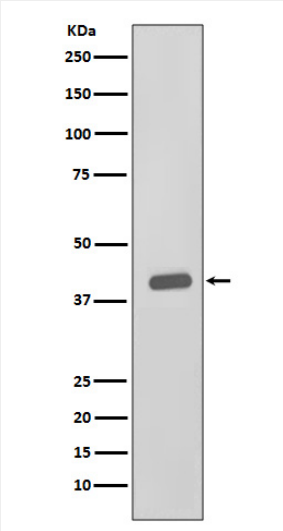
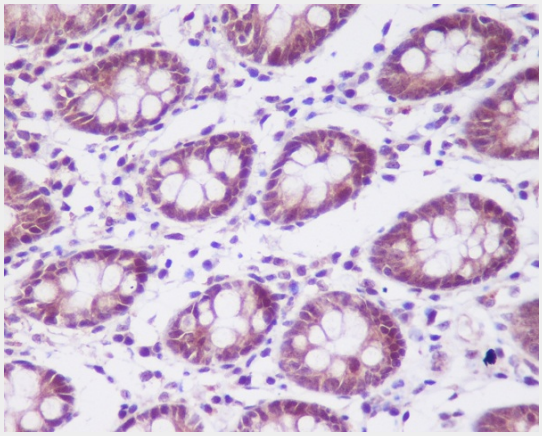


Western blot analysis of CKII alpha expression in HeLa cell lysate.



Immunohistochemical analysis of paraffin-embedded human colon, using CKII alpha Antibody.