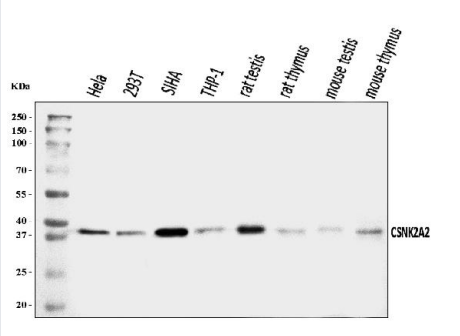
CSNK2A2 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

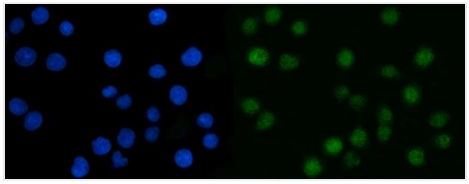
Product Name	CSNK2A2, Polyclonal Antibody
Full Product Name	Anti-CSNK2A2 Antibody Picoband
Product Gene Name	anti-CSNK2A2 antibody
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Lyophilized Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Purity/Purification	Immunogen affinity purified.
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml. (lot specific)
Preparation and Storage	Store at -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months. Avoid repeated freezing and thawing.
Molecular Weight	350
OMIM	115442
3D Structure	ModBase 3D Structure for P19784
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Immunogen	A synthetic peptide corresponding to a sequence of human CSNK2A2 (EHPYFYPVVKEQSQPCADNAVLSSGLTAAR).
Product Categories/Family for anti-CSNK2A2 antibody	Primary Antibodies, Rabbit Polyclonal Antibodies
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-CSNK2A2 antibody	Flow Cytometry (FC/FACS), Immunofluorescence (IF), Immunocytochemistry (ICC), Western Blot (WB)
Application Notes for anti-CSNK2A2 antibody	WB: 0.25-0.5 ug/ml, Human, Mouse, Rat ICC/IF: 5 ug/ml, Human FC/FACS: 1-3 ug/1x10^6 cells, Human Tested Species: In-house tested species with positive results. Enhanced Chemiluminescent Kit with anti-Rabbit IgG (#MBS176460) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (#MBS176453) for ICC.
Related Product Information for anti-CSNK2A2 antibody	Casein kinase II subunit alpha' is an enzyme that in humans is encoded by the CSNK2A2 gene. This gene encodes the alpha', or alpha 2, catalytic subunit of the protein kinase enzyme, casein kinase 2 (CK2). Casein kinase 2 is a serine/threonine protein kinase that phosphorylates acidic proteins such as casein. It is involved in various cellular processes, including cell cycle control, apoptosis, and circadian rhythms. This heterotetrameric kinase includes two catalytic subunits, either alpha or alpha', and two regulatory beta subunits. The closely related gene paralog encoding the alpha, or alpha 1 subunit (CSNK2A1, Gene ID: 1457) is found on chromosome 20. An intronic variant in this gene (alpha 2) may be associated with leukocyte telomere length in a South Asian population. A related transcribed pseudogene is found on chromosome 11.

Other Notes	Small volumes of anti-CSNK2A2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CSNK2A2 purchase	MBS1755395 is an antibody targeting CSNK2A2. Also known as Anti-CSNK2A2 Antibody Picoband. Reactive in Human, Mouse, Rat. Host: Rabbit.



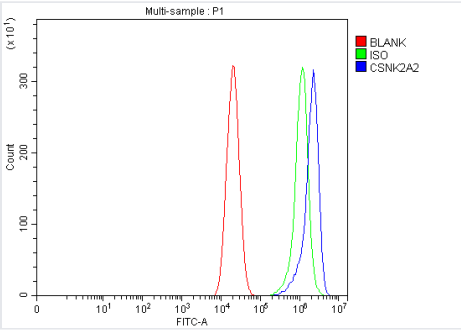
Western Blot (WB) of anti-CSNK2A2 antibody

Figure 1. Western blot analysis of CSNK2A2 using anti-CSNK2A2 antibody (MBS1755395).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.Lane 1: human Hela whole cell lysates,Lane 2: human 293T whole cell lysates,Lane 3: human SiHa whole cell lysates,Lane 4: human THP-1 whole cell lysates,Lane 5: rat testis tissue lysates,Lane 6: rat thymus tissue lysates,Lane 7: mouse testis tissue lysates,Lane 8: mouse thymus tissue lysates.After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-CSNK2A2 antigen affinity purified polyclonal antibody (#MBS1755395) at 0.5 ug/mL overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for CSNK2A2 at approximately 39 kDa. The expected band size for CSNK2A2 is at 41 kDa.



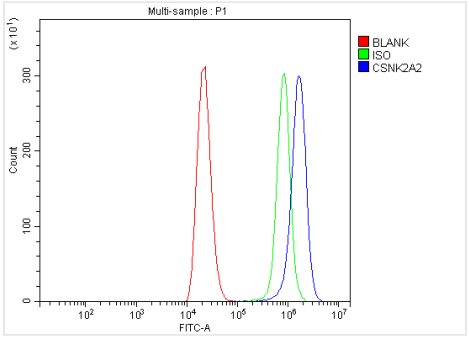
Immunofluorescence (IF) of anti-CSNK2A2 antibody

Figure 2. IF analysis of CSNK2A2 using anti-CSNK2A2 antibody (MBS1755395).CSNK2A2 was detected in an immunocytochemical section of Caco-2 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-CSNK2A2 Antibody (MBS1755395) overnight at 4 degree C. DyLight488 Conjugated Goat Anti-Rabbit IgG (MBS177405) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry (FC/FACS) of anti-CSNK2A2 antibody

Figure 3. Flow Cytometry analysis of Caco-2 cells using anti-CSNK2A2 antibody (MBS1755395).Overlay histogram showing Caco-2 cells stained with MBS1755395 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CSNK2A2 Antibody (MBS1755395, 1 ug/1x10^6 cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG (MBS177405, 5-10 ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



Flow Cytometry (FC/FACS) of anti-CSNK2A2 antibody

Figure 4. Flow Cytometry analysis of THP-1 cells using anti-CSNK2A2 antibody (MBS1755395).Overlay histogram showing THP-1 cells stained with MBS1755395 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CSNK2A2 Antibody (MBS1755395, 1 ug/1x10^6 cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG (MBS177405, 5-10 ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CSNK2A2. It may not necessarily be applicable to this product.

NCBI GI #	125266
NCBI GeneID	1459
NCBI Accession #	P19784.1

UniProt Primary Accession #	P19784
UniProt Related Accession #	P19784
NCBI Official Full Name	Casein kinase II subunit alpha'
NCBI Official Synonym Full Names	casein kinase 2, alpha prime polypeptide
NCBI Official Symbol	CSNK2A2
NCBI Official Synonym Symbols	CK2A2; CSNK2A1
UniProt Protein Name	Casein kinase II subunit alpha'
Protein Family	Casein kinase
UniProt Gene Name	CSNK2A2
UniProt Synonym Gene Names	CK2A2; CK II alpha'
UniProt Entry Name	CSK22_HUMAN
NCBI Protein Information	casein kinase II subunit alpha'; CK II alpha'
UniProt Comments for CSNK2A2	CK2A2: 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. Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. CK2 subfamily. Protein type: Kinase, protein; EC 2.7.11.1; Protein kinase, Other; Protein kinase, Ser/Thr (non-receptor); Other group; CK2 family Chromosomal Location of Human Ortholog: 16q21 Cellular Component: PcG protein complex; nucleus; cytosol Molecular Function: protein serine/threonine kinase activity; protein binding; protein N-terminus binding; ATP binding Biological Process: axon guidance; Wnt receptor signaling pathway; regulation of transcription, DNA-dependent; transcription, DNA-dependent; apoptosis; mitotic cell cycle; protein amino acid phosphorylation
Research Articles on CSNK2A2	**1.** CK2alpha' exhibits a striking preference for caspase-3 phosphorylation in cells as compared to CK2alpha and that CK2beta exhibits the capacity to abolish caspase-3 phosphorylation
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