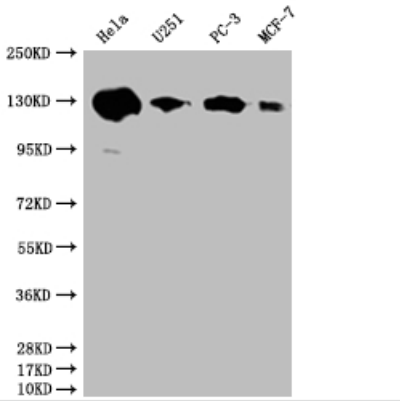
PKN2 Recombinant Monoclonal Antibody

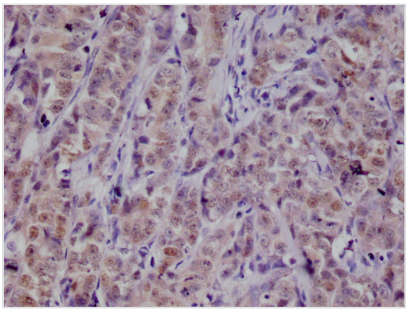
Product Code	CSB-RA921617A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	Q16513
Immunogen	A synthesized peptide derived from human PKN2
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC, IF, FC; Recommended dilution: WB:1:500-1:2000, IHC:1:50-1:200, IF:1:50-1:200, FC:1:50-1:200
Relevance	PKC-related serine/threonine-protein kinase and Rho/Rac effector protein that participates in specific signal transduction responses in the cell. Plays a role in the regulation of cell cycle progression, actin cytoskeleton assembly, cell migration, cell adhesion, tumor cell invasion and transcription activation signaling processes. Phosphorylates CTTN in hyaluronan-induced astrocytes and hence decreases CTTN ability to associate with filamentous actin. Phosphorylates HDAC5, therefore lead to impair HDAC5 import. Direct RhoA target required for the regulation of the maturation of primordial junctions into apical junction formation in bronchial epithelial cells. Required for G2/M phases of the cell cycle progression and abscission during cytokinesis in a ECT2-dependent manner. Stimulates FYN kinase activity that is required for establishment of skin cell-cell adhesion during keratinocytes differentiation. Regulates epithelial bladder cells speed and direction of movement during cell migration and tumor cell invasion. Inhibits Akt pro-survival-induced kinase activity. Mediates Rho protein-induced transcriptional activation via the c-fos serum response factor (SRF). Involved in the negative regulation of ciliogenesis (PubMed:27104747). {ECO:0000269|PubMed:10226025, ECO:0000269|PubMed:10926925, ECO:0000269|PubMed:11777936, ECO:0000269|PubMed:11781095, ECO:0000269|PubMed:15123640, ECO:0000269|PubMed:15364941, ECO:0000269|PubMed:17332740, ECO:0000269|PubMed:20188095, ECO:0000269|PubMed:20974804, ECO:0000269|PubMed:21754995, ECO:0000269|PubMed:27104747, ECO:0000269|PubMed:9121475}.; (Microbial infection) Phosphorylates HCV NS5B leading to stimulation of HCV RNA replication. {ECO:0000269|PubMed:15364941}.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody

Immunogen Species	Homo sapiens (Human)
Research Area	Signal transduction
Gene Names	PKN2
Clone No.	20A8

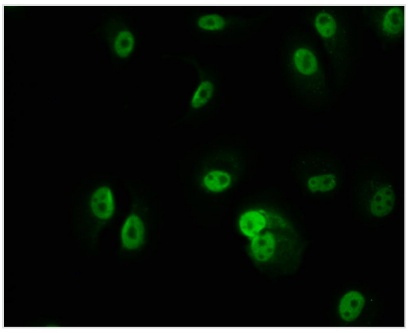
Image



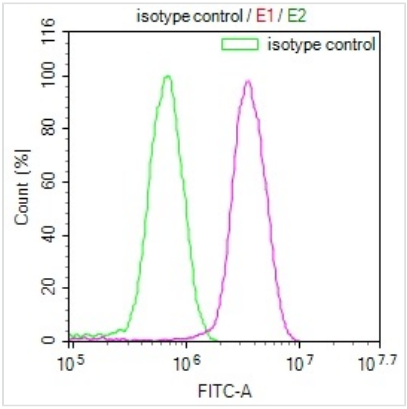
Western Blot
Positive WB detected in: Hela whole cell lysate, U251 whole cell lysate, PC3 whole cell lysate, MCF-7 whole cell lysate
All lanes: PKN2 antibody at 1:2000
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 113, 117, 112 kDa
Observed band size: 130 kDa



IHC image of CSB-RA921617A0HU diluted at 1:100 and staining in paraffin-embedded human colon cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit polymer IgG labeled by HRP and visualized using 0.05% DAB.



Immunofluorescence staining of MCF-7 cell with CSB-RA921617A0HU at 1:50, counter-stained with DAPI. The cells were fixed in 4% formaldehyde and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was Alexa Fluor 509-congugated AffiniPure Goat Anti-Rabbit IgG(H+L).



Overlay Peak curve showing MCF7 cells stained with CSB-RA921617A0HU (red line) at 1:100. The cells were fixed in 4% formaldehyde and permeated by 0.2% TritonX-100. Then 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (1ug/1*10^6cells) for 45min at 4?. The secondary antibody used was FITC-conjugated Goat Anti-rabbit IgG(H+L) at 1:200 dilution for 35min at 4?.Control antibody (green line) was rabbit IgG (1ug/1*10^6cells) used under the same conditions. Acquisition of >10,000 events was performed.

Description

The PKN2 recombinant monoclonal antibody is produced through a well-established and rigorous process to ensure its quality and specificity. Initially, B cells are isolated from an immunized animal using the synthesized peptide derived from human PKN2 as the immunogen. Total RNA is extracted from the B cells and converted into cDNA through reverse transcription. The PKN2 antibody genes are then amplified using specific primers designed for the antibody constant regions and inserted into an expression vector. This vector is transfected into host cells, enabling the production of the PKN2 recombinant monoclonal antibody. Following cell culture, the antibody is harvested from the supernatant and purified using affinity chromatography, resulting in a highly purified preparation. Extensive characterization assays, including ELISA, WB, IHC, IF, and FC analysis, are conducted to validate the antibody's specificity and functionality, ensuring its precise recognition of human PKN2 protein. This meticulous production process guarantees the generation of a reliable and effective PKN2 recombinant monoclonal antibody, suitable for diverse applications in PKN2-related research.