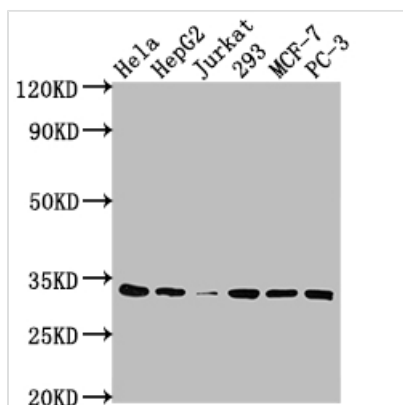




CDK4 Recombinant Monoclonal Antibody

Product Code	CSB-RA965615A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P11802
Immunogen	A synthesized peptide derived from human CDK4
Species Reactivity	Human
Tested Applications	ELISA, WB, IP; Recommended dilution: WB:1:500-1:5000, IP:1:200-1:1000
Relevance	Ser/Thr-kinase component of cyclin D-CDK4 (DC) complexes that phosphorylate and inhibit members of the retinoblastoma (RB) protein family including RB1 and regulate the cell-cycle during G(1)/S transition. Phosphorylation of RB1 allows dissociation of the transcription factor E2F from the RB/E2F complexes and the subsequent transcription of E2F target genes which are responsible for the progression through the G(1) phase. Hypophosphorylates RB1 in early G(1) phase. Cyclin D-CDK4 complexes are major integrators of various mitogenic and antimitogenic signals. Also phosphorylates SMAD3 in a cell-cycle-dependent manner and represses its transcriptional activity. Component of the ternary complex, cyclin D/CDK4/CDKN1B, required for nuclear translocation and activity of the cyclin D-CDK4 complex.
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	Isotype/Loading Controls; Epigenetics and Nuclear Signaling; Cancer; Cell biology
Gene Names	CDK4
Clone No.	8F2
Image	



Western Blot

Positive WB detected in: HeLa whole cell lysate, HepG2 whole cell lysate, Jurkat whole cell lysate, 293 whole cell lysate, MCF-7 whole cell lysate, PC-3 whole cell lysate

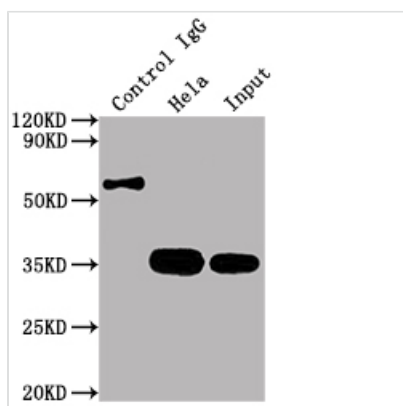
All lanes: CDK4 antibody at 1:2000

Secondary

Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 34, 21 kDa

Observed band size: 34 kDa



Immunoprecipitating CDK4 in HeLa whole cell lysate

Lane 1: Rabbit control IgG instead of CSB-RA965615A0HU in HeLa whole cell lysate. For western blotting, a HRP-conjugated Protein G antibody was used as the secondary antibody (1/1500)

Lane 2: CSB-RA965615A0HU (2μg) + HeLa whole cell lysate (500μg)

Lane 3: HeLa whole cell lysate (10μg)

Description

The CDK4 recombinant monoclonal antibody is yielded using protein and DNA recombinant technology. Initially, mice are immunized with a synthetic peptide derived from human CDK4. After a specific duration, spleen cells are isolated aseptically from the immunized mice, and the total RNA of the cells is extracted. cDNA, synthesized by RNA reverse transcription, serves as a template for PCR amplification of the CDK4 antibody gene. Subsequently, the gene is cloned into a vector and then transfected into host cells for culturing. The supernatant from the cultured cells is purified via affinity chromatography, resulting in the purified CDK4 recombinant monoclonal antibody. This antibody is extensively validated and can be employed in ELISA, WB, and IP experiments for the detection of human CDK4 protein.

The CDK4 protein is a serine/threonine kinase that plays a crucial role in regulating the progression of the cell cycle. CDK4 is one of the key components of the Cyclin D-CDK4/6 complex, which is involved in the G1/S transition of the cell cycle. The complex phosphorylates and inactivates the retinoblastoma protein (pRb), leading to the activation of E2F transcription factors and the transcription of genes required for DNA synthesis and cell proliferation. CDK4 is also involved in other cellular processes, such as differentiation, apoptosis, and transcriptional regulation, through its interactions with other proteins and signaling pathways. Dysregulation of CDK4 activity is implicated in many types of cancer.