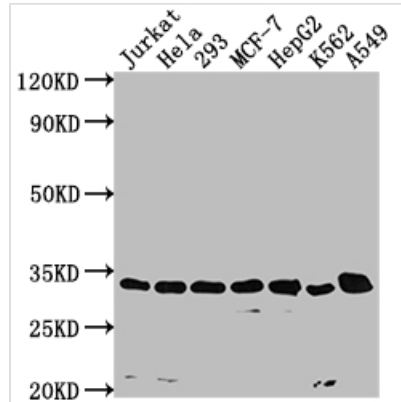




# CDK4 Recombinant Monoclonal Antibody

<b>Product Code</b>	CSB-RA697694A0HU
<b>Storage</b>	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
<b>Uniprot No.</b>	P11802
<b>Immunogen</b>	A synthesized peptide derived from human CDK4
<b>Species Reactivity</b>	Human
<b>Tested Applications</b>	ELISA, WB; Recommended dilution: WB:1:500-1:5000
<b>Relevance</b>	<p>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.</p>
<b>Form</b>	Liquid
<b>Conjugate</b>	Non-conjugated
<b>Storage Buffer</b>	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
<b>Purification Method</b>	Affinity-chromatography
<b>Isotype</b>	Rabbit IgG
<b>Clonality</b>	Monoclonal
<b>Product Type</b>	Recombinant Antibody
<b>Immunogen Species</b>	Homo sapiens (Human)
<b>Research Area</b>	Isotype/Loading Controls; Epigenetics and Nuclear Signaling; Cancer; Cell biology
<b>Gene Names</b>	CDK4
<b>Clone No.</b>	8H4
<b>Image</b>	



#### Western Blot

Positive WB detected in: Jurkat whole cell lysate, HeLa whole cell lysate, 293 whole cell lysate, MCF-7 whole cell lysate, HepG2 whole cell lysate, K562 whole cell lysate, A549 whole cell lysate

All lanes: CDK4 antibody at 1:1500

Secondary

Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 34, 21 kDa

Observed band size: 34 kDa

## Description

The CDK4 recombinant monoclonal antibody is created using protein technology and DNA recombinant technology. Initially, mice are immunized with a synthesized peptide from human CDK4, and after a certain period of time, the spleen cells are removed under aseptic conditions. The total RNA of spleen cells is extracted and converted into cDNA by RNA reverse transcription. The cDNA is used as a template for PCR amplification of the CDK4 antibody gene. The obtained CDK4 antibody gene is then introduced into a vector, which is transfected into host cells for culture. The CDK4 recombinant monoclonal antibody is purified from the supernatant of cell culture through affinity chromatography and has been thoroughly verified for its use in ELISA and WB experiments in detecting human CDK4 protein.

CDK4 is a protein that functions as a serine/threonine kinase. It plays a crucial role in cell cycle progression by regulating the G1/S transition. Once activated, the CDK4-cyclin D complex phosphorylates and inactivates the retinoblastoma protein (Rb). Phosphorylation of Rb releases E2F, which then activates the expression of genes required for DNA replication and cell division. Dysregulation of CDK4 activity has been implicated in the development of various types of cancer.