Anti-Cdk4 Antibody [SD20-42]

ET1612-1

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IF-Tissue, IHC-P
Molecular Wt:	Predicted band size: 34 kDa
Clone number:	SD20-42

Description: Cell cycle progression is controlled in part by a family of cyclin proteins and cyclin dependent kinases (Cdks). Cdk proteins work in concert with the cyclins to phosphorylate key substrates involved in each phase of cell cycle progression . Another family of proteins, Cdk inhibitors, also plays a role in regulating the cell cycle by binding to cyclin-Cdk complexes and modulating their activity. Several Cdk proteins have been identified, including Cdk2-Cdk8, PCTAIRE-1-PCTAIRE-3, PITALRE and PITSLRE. Cdk4, in complex with D-type cyclins, is thought to regulate cell growth during the G1 phase of the cell cycle. This association with a D-type cyclin upregulates Cdk4 activity, whereas binding to the Cdk inhibitor p16 downregulates Cdk4 activity. Activation of the Cdk4-cyclin complexes requires phosphorylation on a single threonyl residue of Cdk4, catalyzed by a Cdk-activating protein (CAK).

Immunogen: Recombinant protein within mouse Cdk4 aa 180-303.

Positive control: HeLa cell lysate, MCF7 cell lysate, human lung cancer tissue.

Subcellular location: Nucleus, Nucleus membrane, Cytoplasm.

Database links: SwissProt: P11802 Human

Recommended Dilutions:

WB	1:1,000-1:5,000
IF-Tissue	1:50-1:200
IHC-P	1:50-1:200

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

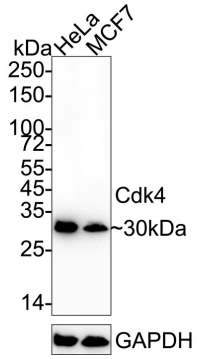

Fig1: Western blot analysis of Cdk4 on different lysates with Rabbit anti-Cdk4 antibody (ET1612-1) at 1/1,000 dilution.

Lane 1: HeLa cell lysate
Lane 2: MCF7 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 34 kDa
Observed band size: 30 kDa

Exposure time: 40 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1612-1) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

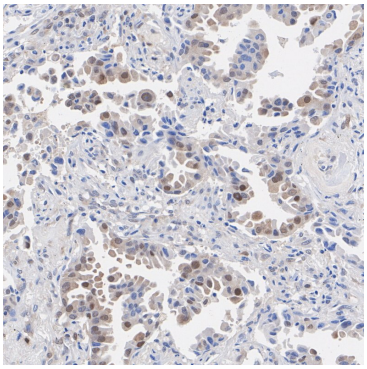

Fig2: Immunohistochemical analysis of paraffin-embedded human lung cancer tissue with Rabbit anti-Cdk4 antibody (ET1612-1) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1612-1) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Machado-Neto, JA. et al. 2014. ANKHD1, a novel component of the Hippo signaling pathway, promotes YAP1 activation and cell cycle progression in prostate cancer cells. Exp. Cell Res.. 324: 137-45.
2. Liu, Y. et al. 2010. Rosiglitazone inhibits cell proliferation by inducing G1 cell cycle arrest and apoptosis in ADPKD cyst-lining epithelia cells. Basic Clin. Pharmacol. Toxicol.. 106: 523-530.