10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CDK4 Antibody [Knockout Validated]

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8485b

Product Information

Application	WB, IHC-P, E
Primary Accession	P11802
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit
Host	Mouse
Clonality	monoclonal
Isotype	IgG2a,κ
Clone Names	1529CT850.162.73
Calculated MW	33730

Additional Information

Gene ID	1019
Other Names	Cyclin-dependent kinase 4, Cell division protein kinase 4, PSK-J3, CDK4
Target/Specificity	This CDK4 antibody is generated from a mouse immunized with a recombinant protein.
Dilution	WB~~1:2000 IHC-P~~1:300 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CDK4 Antibody [Knockout Validated] is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CDK4 {ECO:0000303|PubMed:7652577, ECO:0000312|HGNC:HGNC:1773}
Function	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 mitogenenic 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.
Cellular Location	Cytoplasm. Nucleus. Nucleus membrane. Note=Cytoplasmic when non-complexed Forms a cyclin D-CDK4 complex in the cytoplasm as cells progress through G(1) phase. The complex accumulates on the nuclear membrane and enters the nucleus on transition from G(1) to S phase. Also present in nucleoli and heterochromatin lumps. Colocalizes with RB1 after release into the nucleus.

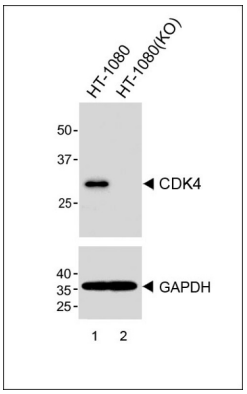
Background

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 mitogenenic 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.

References

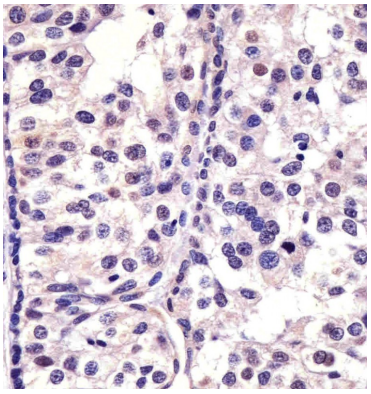
Hanks S.K.,et al.Submitted (FEB-1987) to the EMBL/GenBank/DDBJ databases.
Elkahloun A.G.,et al.Genomics 42:295-301(1997).
Wolfel T.,et al.Science 269:1281-1284(1995).
Zuo L.,et al.Nat. Genet. 12:97-99(1996).
Ota T.,et al.Nat. Genet. 36:40-45(2004).

Images

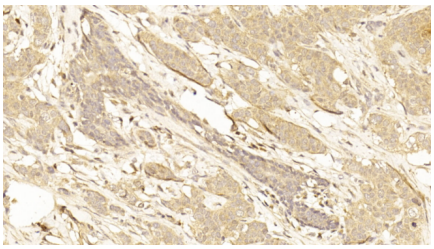


All lanes : Anti-CDK4 Antibody at 1:1000 dilution (upper) Lane 1: HT1080 Lane 2: HT1080-Knockout Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Mouse IgG, (H+L), Peroxidase conjugated (ASP1613) at 1/8000 dilution. Predicted band size : 33 kDa

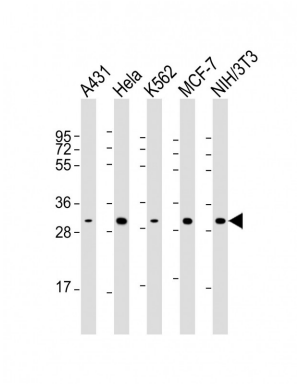
AM8485b staining CDK4 in human breast carcinoma sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for



1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



Immunohistochemical analysis of paraffin-embedded Human Breast cancer section using Pink1(Cat#AM8485b). AM8485b was diluted at 1:300 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.



All lanes : Anti-CDK4 Antibody at 1:2000 dilution Lane 1: A431 whole cell lysate Lane 2: Hela whole cell lysate Lane 3: K562 whole cell lysate Lane 4: MCF-7 whole cell lysate Lane 5: NIH/3T3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 34 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.