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Anti-Cyclin D1 CCND1 Rabbit Monoclonal Antibody

Catalog # ABO13966

Product Information

Application	WB, IHC, IF, ICC, IP
Primary Accession	P24385
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-Cyclin D1 CCND1 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, IP applications. This antibody reacts with Human, Mouse, Rat.

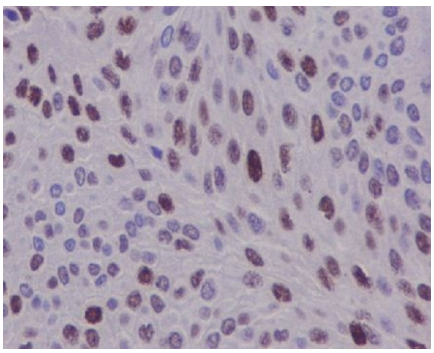
Additional Information

Gene ID	595
Other Names	G1/S-specific cyclin-D1, B-cell lymphoma 1 protein, BCL-1, BCL-1 oncogene, PRAD1 oncogene, CCND1 {ECO:0000303|PubMed:8204893, ECO:0000312|HGNC:HGNC:1582}
Calculated MW	33729
Application Details	WB 1:1000-1:5000 IHC 1:50-1:200 ICC/IF 1:50-1:100 IP 1:50
Subcellular Localization	Nucleus. Cytoplasm. Membrane. Cyclin D-CDK4 complexes accumulate at the nuclear membrane and are then translocated to the nucleus through interaction with KIP/CIP family members..
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: DAD-3
Immunogen	A synthesized peptide derived from human Cyclin D1
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

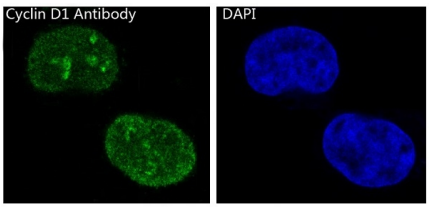
Protein Information

Name	CCND1 {ECO:0000303|PubMed:8204893, ECO:0000312|HGNC:HGNC:1582}
Function	Regulatory component of the cyclin D1-CDK4 (DC) complex that phosphorylates and inhibits members of the retinoblastoma (RB) protein family including RB1 and regulates the cell-cycle during G(1)/S transition (PubMed:1827756, PubMed:1833066, PubMed:19412162, PubMed:33854235, PubMed:8114739, PubMed:8302605). Phosphorylation of RB1 allows dissociation of the transcription factor E2F from the RB/E2F complex and the subsequent transcription of E2F target genes which are responsible for the progression through the G(1) phase (PubMed:1827756, PubMed:1833066, PubMed:19412162, PubMed:8114739, PubMed:8302605). Hypophosphorylates RB1 in early G(1) phase (PubMed:1827756, PubMed:1833066, PubMed:19412162, PubMed:8114739, PubMed:8302605). Cyclin D-CDK4 complexes are major integrators of various mitogenenic and antimitogenic signals (PubMed:1827756, PubMed:1833066, PubMed:19412162, PubMed:8302605). Also a substrate for SMAD3, phosphorylating SMAD3 in a cell-cycle-dependent manner and repressing its transcriptional activity (PubMed:15241418). Component of the ternary complex, cyclin D1/CDK4/CDKN1B, required for nuclear translocation and activity of the cyclin D-CDK4 complex (PubMed:9106657). Exhibits transcriptional corepressor activity with INSM1 on the NEUROD1 and INS promoters in a cell cycle-independent manner (PubMed:16569215, PubMed:18417529).
Cellular Location	Nucleus. Cytoplasm. Nucleus membrane. Note=Cyclin D-CDK4 complexes accumulate at the nuclear membrane and are then translocated to the nucleus through interaction with KIP/CIP family members

Images

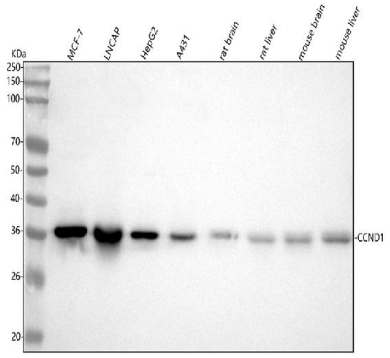


Immunohistochemical analysis of paraffin-embedded human bladder, using Cyclin D1 Antibody.

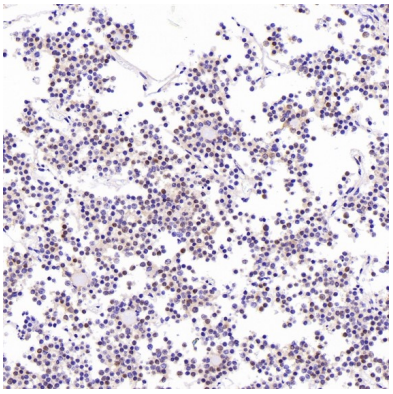


Immunofluorescent analysis of MCF-7 cells, using Cyclin D1 Antibody.

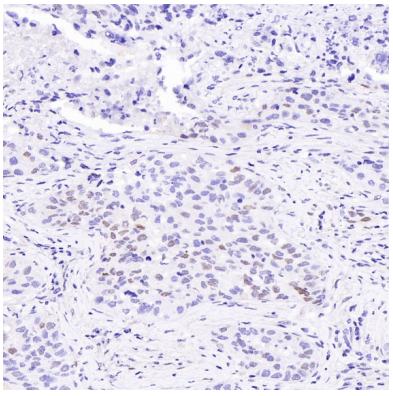
Figure 1. Western blot analysis of Cyclin D1 using anti-Cyclin D1 antibody (M00149-1).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours.
The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human MCF-7 whole cell lysates,
Lane 2: human LNCAP whole cell lysates,
Lane 3: human HepG2 whole cell lysates,



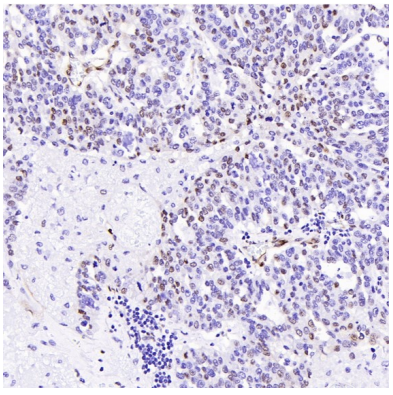
Lane 4: human A431 whole cell lysates,
Lane 5: rat brain tissue lysates,
Lane 6: rat liver tissue lysates,
Lane 7: mouse brain tissue lysates,
Lane 8: mouse liver tissue lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Cyclin D1 antigen affinity purified monoclonal antibody (Catalog # M00149-1) at 1:1000 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:1000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Cyclin D1 at approximately 34 kDa. The expected band size for Cyclin D1 is at 34 kDa.



Immunohistochemical analysis of paraffin-embedded Human pituitary tumor, using the Antibody at 1:100 dilution.

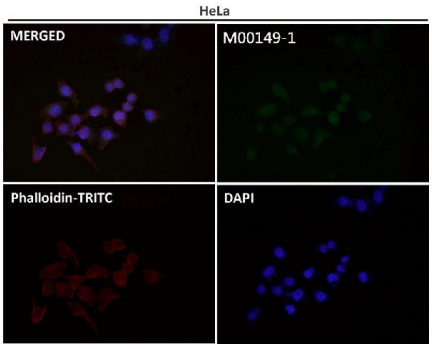


Immunohistochemical analysis of paraffin-embedded Human squamous cell carcinoma , using the Antibody at 1:100 dilution.



Immunohistochemical analysis of paraffin-embedded Human ovarian cancer, using the Antibody at 1:500 dilution.

Immunofluorescent analysis using the Antibody at 1:50 dilution.



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