ARG62968
anti-Cyclin D1 antibody [CD1.1]

Package: 100 µg, 50 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [CD1.1] recognizes Cyclin D1
Tested Reactivity	Hu, Ms, Rat
Tested Application	ELISA, FACS, ICC/IF, IHC-Fr, IHC-P, IP, WB
Specificity	The clone CD1.1 recognizes cyclin D1, an ubiquitously expressed 33 kDa protein that migrates as a 36 kDa band under reducing SDS-PAGE conditions.
Host	Mouse
Clonality	Monoclonal
Clone	CD1.1
Isotype	IgG1
Target Name	Cyclin D1
Immunogen	Purified cyclin D1 protein
Conjugation	Un-conjugated
Alternate Names	B-cell lymphoma 1 protein; PRAD1; U21B31; D11S287E; BCL-1; G1/S-specific cyclin-D1; BCL-1 oncogene; BCL1; PRAD1 oncogene

Application Instructions

Application table

Application	Dilution
ELISA	Assay-dependent
FACS	Assay-dependent
ICC/IF	1 µg/ml
IHC-Fr	2 µg/ml
IHC-P	Assay-dependent
IP	1 µg/ml
WB	1 µg/ml

Application Note: FACS: Membrane permeabilization is required.
IHC-P: Antigen Retrieval: Heat mediation was performed in Sodium citrate buffer (pH 6.0).
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Positive Control: IHC-Fr: Colon tissue.

Properties

Form	Liquid

Purification	Purified from ascites by protein-A affinity chromatography.
Purity	> 95% (by SDS-PAGE)
Buffer	PBS, 15 mM Sodium azide and 0.2% (w/v) high-grade protease free BSA
Preservative	15 mM Sodium azide
Stabilizer	0.2% (w/v) high-grade protease free BSA
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	CCND1
Gene Full Name	cyclin D1
Background	Cyclin D1 (PRAD1, Bcl-1) is a cytoplasmic and nuclear protein, which is synthesized during G1 phase and assembles with either cyclin-dependent kinase 4 (CDK4) or CDK6 in response to growth factor stimulation. D-type cyclin-CDK complexes act to inactivate the growth-suppressive function of the Rb protein through its phosphorylation, and titrate CDK inhibitors such as p21Cip1 and p27Kip1. Whereas during G1 phase cyclin D1 accumulates in the nucleus, it translocates into the cytoplasm during S phase. Without growth factor-mediated stimulation cyclin D1 is unstable, and undergoes ubiquitin-mediated degradation, which is triggered by its phosphorylation. Cyclin D1 destabilization participates in G1/S phase arrest.
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. 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. Hypophosphorylates RB1 in early G(1) phase. Cyclin D-CDK4 complexes are major integrators of various mitogenenic and antimitogenic signals. Also substrate for SMAD3, phosphorylating SMAD3 in a cell-cycle-dependent manner and repressing its transcriptional activity. Component of the ternary complex, cyclin D1/CDK4/CDKN1B, required for nuclear translocation and activity of the cyclin D-CDK4 complex. Exhibits transcriptional corepressor activity with INSM1 on the NEUROD1 and INS promoters in a cell cycle-independent manner. [UniProt]
Highlight	Related products: Cyclin D1 antibodies; Anti-Mouse IgG secondary antibodies;
Research Area	Cancer antibody; Cell Biology and Cellular Response antibody; Gene Regulation antibody
Calculated Mw	34 kDa
PTM	Phosphorylation at Thr-286 by MAP kinases is required for ubiquitination and degradation following DNA damage. It probably plays an essential role for recognition by the FBXO31 component of SCF (SKP1-cullin-F-box) protein ligase complex. Ubiquitinated, primarily as 'Lys-48'-linked polyubiquitination. Ubiquitinated by a SCF (SKP1-CUL1-F-box protein) ubiquitin-protein ligase complex containing FBXO4 and CRYAB. Following DNA damage it is ubiquitinated by some SCF (SKP1-cullin-F-box) protein ligase complex containing FBXO31. SCF-type ubiquitination is dependent on Thr-286 phosphorylation (By similarity). Ubiquitinated also by UHRF2 apparently in a phosphorylation-independent manner. Ubiquitination leads to its degradation and G1 arrest. Deubiquitinated by USP2; leading to its stabilization.