ARG42292
anti-Cyclin D1 antibody [DCS-6] (PE)

Package: 50 µg
Store at: 4°C

Summary

Product Description	PE-conjugated Mouse Monoclonal antibody [DCS-6] recognizes Cyclin D1
Tested Reactivity	Hu, Ms, Rat, NHuPrm
Species Does Not React With	Cat, Sheep
Tested Application	FACS
Specificity	The mouse monoclonal antibody DCS-6 recognizes cyclin D1, an ubiquitously expressed 33 kDa intracellular protein that migrates as a 36 kDa band under reducing SDS-PAGE conditions.
Host	Mouse
Clonality	Monoclonal
Clone	DCS-6
Isotype	IgG2a
Target Name	Cyclin D1
Species	Human
Immunogen	Recombinant Human Cyclin D1 (aa. 1-295).
Conjugation	PE
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
FACS	1 µg/ml

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

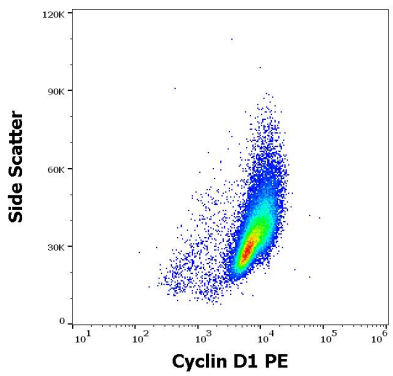
Form	Liquid
Purification	Purified
Buffer	PBS and 15 mM Sodium azide.
Preservative	15 mM Sodium azide
Concentration	0.1 mg/ml
Storage instruction	Aliquot and store in the dark at 2-8°C. Keep protected from prolonged exposure to light. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

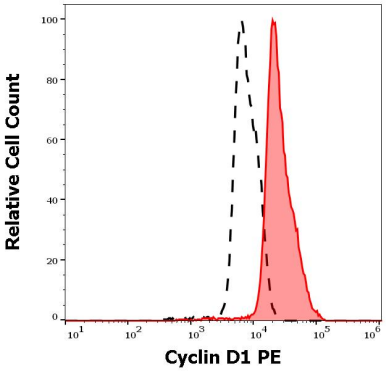
Gene Symbol	CCND1
Gene Full Name	cyclin D1
Background	The protein encoded by this gene belongs to the highly conserved cyclin family, whose members are characterized by a dramatic periodicity in protein abundance throughout the cell cycle. Cyclins function as regulators of CDK kinases. Different cyclins exhibit distinct expression and degradation patterns which contribute to the temporal coordination of each mitotic event. This cyclin forms a complex with and functions as a regulatory subunit of CDK4 or CDK6, whose activity is required for cell cycle G1/S transition. This protein has been shown to interact with tumor suppressor protein Rb and the expression of this gene is regulated positively by Rb. Mutations, amplification and overexpression of this gene, which alters cell cycle progression, are observed frequently in a variety of human cancers. [provided by RefSeq, Dec 2019]
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]
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. [UniProt]
Cellular Localization	Nucleus. Cytoplasm. 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. [UniProt]

Images



ARG42292 anti-Cyclin D1 antibody [DCS-6] (PE) FACS image

Flow Cytometry: HUVEC cells stained with ARG42292 anti-Cyclin D1 antibody [DCS-6] (PE) at 15 µg/ml dilution.



ARG42292 anti-Cyclin D1 antibody [DCS-6] (PE) FACS image

Flow Cytometry: Separation of HUVEC cells stained with ARG42292 anti-Cyclin D1 antibody [DCS-6] (PE) at 15 µg/ml dilution (red-filled) from HUVEC cells stained with Mouse IgG2a Isotype Control antibody [MOPC-173] (PE) at 15 µg/ml dilution (black-dashed).