

Technical Data Sheet

FITC Mouse Anti-Human Cyclin D3 Set

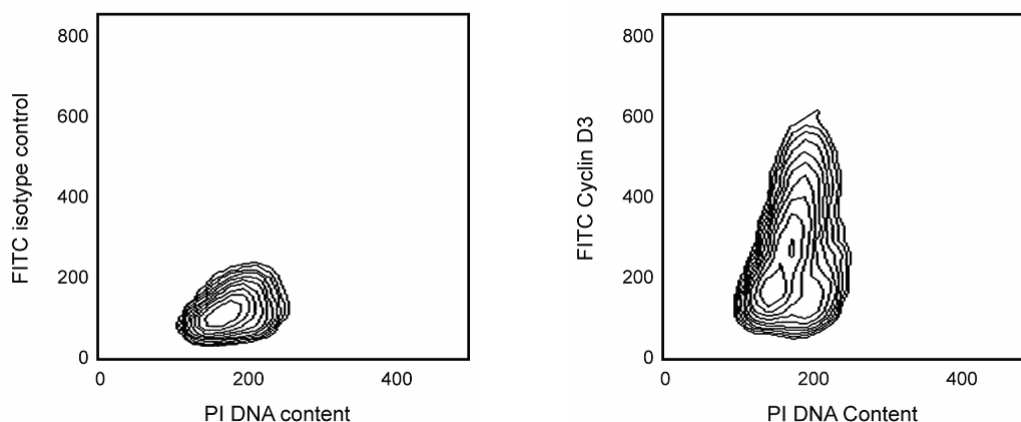
Product Information

Material Number:	554111
Size:	100 tests
Reactivity:	QC Testing: Human
Component:	51-13894X
Description:	FITC Mouse Anti-Human Cyclin D3
Size:	100 tests (1 ea)
Vol. per Test:	20 µl
Clone Name:	G107-565
Isotype:	Mouse IgG1
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.
Component:	51-13854X-3
Description:	FITC Mouse IgG1, κ Isotype Control
Size:	100 tests (1 ea)
Vol. per Test:	20 µl
Clone Name:	MOPC-21
Isotype:	Mouse IgG1, κ
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

Cyclins and cyclin-dependent kinases (cdks) are evolutionarily conserved proteins that are essential for cell-cycle control in eukaryotes. Cyclins (regulatory subunits) bind to cdks (catalytic subunits) to form complexes that regulate the progression of the cell cycle. The main cyclin-cdk complexes formed in vertebrate cells are cyclin D-cdk4 (G0/G1), cyclin E-cdk2 (G1/S), cyclin A-cdk2 (S) and cyclin B1-cdk1 (G2/M). These complexes are regulated by activating and inhibitory phosphorylation events, as well as by interactions with small proteins that bind to cyclins, cdks, or cyclin-cdk complexes, e.g., p21 and p27Kip1. Specific substrates for cdk-cyclin complexes include nuclear lamins, histones, oncogenes (c-src, c-abl, SV40 large T-Ag), tumor suppressor genes (e.g., retinoblastoma protein [Rb] and p53), nucleolin, RNA polymerase II and others. It is thought that D-type cyclins are involved in regulating the passage of mammalian cells through G1.

Clone G107-565 recognizes human cyclin D3. It does not cross-react with human cyclins D1 and D2. MOPC-1 is used as a mouse IgG1 isotype (negative) control. The MOPC-21 antibody has unknown specificity. The G107-565 and MOPC-21 FITC conjugates are matched in F/P ratios.



Cyclin D3 expression in PHA-stimulated peripheral blood mononuclear cells (PMBC). Cells were stained with (left panel), a FITC-conjugated isotype control (Cat. No. 51-13854X) or (right panel), FITC-conjugated cyclin D3 (Cat. No. 51-13894X). DNA was stained with Propidium iodide.

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Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with FITC under optimum conditions, and unreacted FITC was removed.

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry	Routinely Tested
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Recommended Assay Procedure:

To find protocols for staining with anti-cyclin antibodies, see our website at

http://www.bdbiosciences.com/pharmingen/protocols/Human_Cyclins.shtml.

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^6 cells in a 100- μ l experimental sample (a test).
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Darzynkiewicz Z, Gong J, Juan G, Ardelt B, Traganos F. Cytometry of cyclin proteins. *Cytometry*. 1996; 25(1):1-13.(Clone-specific: Western blot)

Gong J, Bhatia U, Traganos F, Darzynkiewicz Z. Expression of cyclins A, D2 and D3 in individual normal mitogen stimulated lymphocytes and in MOLT-4 leukemic cells analyzed by multiparameter flow cytometry. *Leukemia*. 1995; 9(5):893-899.(Clone-specific: Flow cytometry)

Gong J, Traganos F, Darzynkiewicz Z. Threshold expression of cyclin E but not D type cyclins characterizes normal and tumour cells entering S phase. *Cell Prolif*. 1995; 28(6):337-346.(Clone-specific: Flow cytometry)

Sherr CJ. Mammalian G1 cyclins. *Cell*. 1993; 73(6):1059-1065.(Biology)