Technical Data Sheet

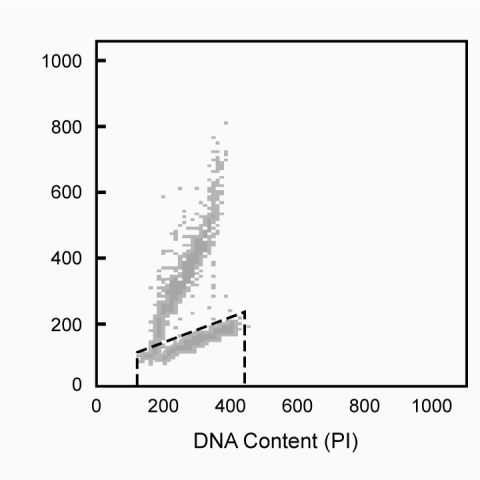
FITC Mouse Anti-Human Cyclin A Set

Product Information

Material Number:	**554107**
Size:	100 tests
Reactivity:	QC Testing: Human
Component:	**51-13824X**
Description:	FITC Mouse Anti-Human Cyclin A
Size:	100 tests (1 ea)
Vol. per Test:	20 µl
Clone Name:	BF683
Isotype:	Mouse IgE
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.
Component:	**51-13834X**
Description:	FITC Mouse IgE κ Isotype Control
Size:	100 tests (1 ea)
Vol. per Test:	20 µl
Clone Name:	IgE-3
Isotype:	Mouse (BALB/c) IgE, κ
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

Cyclins and cyclin-dependent kinases (cdks) have been shown to be subunits of cell cycle dependent protein kinases that regulate key events during the progression of the cell cycle and are highly conserved. Specific substrates for cdk/cyclin kinases include nuclear lamins, nucleolin, RNA polymerase II, retinoblastoma protein, SV40 large T antigen, p53 tumor suppressor protein, and the oncogene kinases c-src and c-abl. Cyclin A has been shown to be mainly active during S phase of the cell cycle. Cyclin A and cdk2 are thought to function in the control of the cell cycle. They bind to one another forming an active kinase that resembles the cell cycle-regulating MPF (maturation promoting factor) complex containing cdc2 (cdk1) and cyclin B1. Cyclin A forms a stable complex with the adenovirus oncoproteins E1A. Human cyclin A migrates with an apparent molecular weight of ~ 60 kDa by SDS/PAGE. Clone BF683 reacts with human cyclin A and reportedly does not cross-react to mouse, mink, or rat cyclin A.



Flow cytometric analysis for cyclin A in MOLT-4 cells (Human T-lymphoblasts; ATCC CRL-1582). *MOLT-4 cells were fixed, permeabilized and stained with the FITC mouse anti-human cyclin A antibody (component no. 51-13824X) or a FITC mouse IgE isotype control (component no. 51-13834X). The dotted lines denote the isotype control staining, Cells were counterstained with propidium iodide (PI) to measure DNA content.*

Preparation and Storage

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

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.

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Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
559925	7-AAD	2.0 ml	(none)
554174	Purified Mouse Anti-Human Cyclin A	0.1 mg	BF683
550913	PE Mouse Anti-Human Cyclin A Set	100 tests	(none)

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-µl experimental sample (a test).
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
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. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
5. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Cao L, Faha B, Dembski M, Tsai LH, Harlow E, Dyson N. Independent binding of the retinoblastoma protein and p107 to the transcription factor E2F. *Nature.* 1992; 355(6356):176-179. (Biology: Immunoprecipitation, Western blot)

Faha B, Ewen ME, Tsai LH, Livingston DM, Harlow E. Interaction between human cyclin A and adenovirus E1A-associated p107 protein. *Science.* 1992; 255(5040):87-90. (Biology: Immunoprecipitation, In vitro kinase assay, Western blot)

Faha B, Harlow E, Lees E. The adenovirus E1A-associated kinase consists of cyclin E-p33cdk2 and cyclin A-p33cdk2. *J Virol.* 1993; 67(5):2456-2465. (Biology: Immunoprecipitation, In vitro kinase assay)

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. (Biology: Flow cytometry)

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