Technical Data Sheet

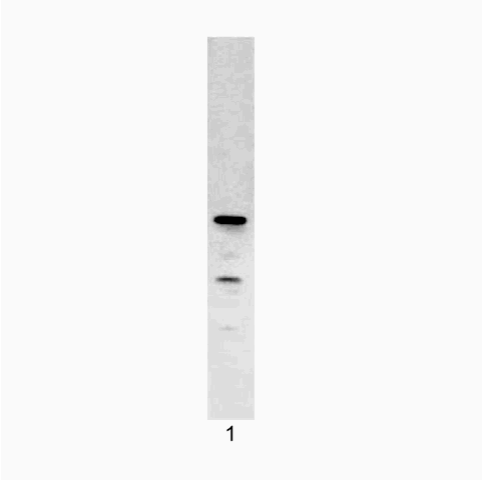
Purified Mouse Anti-Human Cyclin A1

Product Information

Material Number:	**556600**
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	B88-2
Immunogen:	Human cyclin A1 aa. 46-93
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Target MW:	65 kDa
Storage Buffer:	Aqueous buffered solution containing ≤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 contain a conserved amino acid sequence motif, the cyclin box, which allows their binding to cdks to form active complexes that regulate the progression of the cell cycle. These complexes are regulated by activating and inhibitory phosphorylation events, as well as by interactions with small regulatory proteins including p21 and p27[Kip1]. Specific substrates for cyclin-cdk complexes include nuclear lamins, histones, tumor suppressor genes, nucleolin and others. Cyclin A plays a regulatory role during both S-phase and G2/M transitions through its association with cdk2 and cdk1, respectively. A related cyclin, designated cyclin A1, has also been identified. Cyclin A1 shares 48% sequence identity with cyclin A. Yeast two hybrid analysis has shown that, like cyclin A, cyclin A1 also forms a complex with cdk2. Cyclin A1 does not appear to bind cdk1, cdk2 or cdk5. In contrast to cyclin A, cyclin A1 appears to be predominantly expressed in myeloid leukemia cells; however mRNA analysis has suggested that low levels of gene expression may be found in many other hematopoietic and non-hematopoietic cell types. Human cyclin A1 is observed at ~ 65 kD by SDS-PAGE. B88-2 reacts with human cyclin A1. It does not cross-react with cyclin A. A polypeptide fragment containing amino acids 46-93 of human cyclin A1 was used as immunogen.



Western blot analysis of cyclin A1 in THP-1 human monocyte lysate. *Anti-human cycllin A1 identifies cyclin A1 as an ~ 65 kD band.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at 4°C.

Application Notes

Application

Western blot	Routinely Tested

Recommended Assay Procedure:

Clone B88-2 may be used for western blot analysis (8 µg/ml). THP-1 human monocyte cells (ATCC TIB202) are suggested as a positive control for this application.

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
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.

References

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)

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

Yang R, Morosetti R, Koeffler HP. Characterization of a second human cyclin A that is highly expressed in testis and in several leukemic cell lines. *Cancer Res.* 1997; 57(5):913-920.(Biology)