

Technical Data Sheet

Purified Mouse Anti-Human Cyclin D2

Product Information

Material Number:	554201
Size:	0.25 mg
Concentration:	0.5 mg/ml
Clone:	G132-43
Immunogen:	Recombinant Human Cyclin D2
Isotype:	Mouse IgG2a
Reactivity:	QC Testing: Human
Target MW:	35 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 (regulatory subunits) bind to cdks (catalytic subunits) to form complexes that regulate the progression of the cell cycle. The main cyclin-cdks 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 or inhibitory phosphorylation events, as well as by interactions with small proteins, e.g., p16 and p27, that bind to cyclins, cdks, and cyclin-cdk complexes. Specific substrates for cdk-cyclin complexes include nuclear lamins, histones, oncogenes (c-src, c-abl, SV40 large T-Ag), tumor suppressor genes (retinoblastoma protein [Rb] and p53), nucleolin, RNA polymerase II and others. D-type cyclins are expressed mainly in G1 and play a role in regulating the passage of mammalian cells through the G1 phase of the cell cycle. The reduced molecular weights of D-type cyclins are as follows: cyclin D1 (36 kDa), cyclin D2 (35 kDa), and cyclin D3 (31 and 34 kDa [doublet]). G132-43 recognizes human cyclin D2. It does not cross-react with human cyclins D1 and D3. Recombinant, full-length human cyclin D2 produced in the Baculovirus expression system (BEVS) was used as immunogen.

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
Immunoprecipitation	Tested During Development

Recommended Assay Procedure:

Applications include western blotting (1-2 µg/ml) and immunoprecipitation (1-2 µg/one million cells). D-type cyclins are differentially expressed in distinct cell types, therefore cell types which have been documented to express high levels of a given D-type cyclin are suggested as positive controls for these applications. WI-38 human diploid fibroblasts (ATCC CCL 75) and U-118 MG human glioblastoma cells (ATCC HTB 15) are suggested as positive controls for detection of cyclin D1 and D3. Primary human peripheral blood T lymphocytes stimulated with phytohemagglutinin (PHA) and Raji human Burkitt lymphoma cells (ATCC CCL 86) are suggested as positive controls for detecting cyclin D2.

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
611476	WI-38 Cell Lysate	500 µg	(none)

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

Meyerson M, Harlow E. Identification of G1 kinase activity for cdk6, a novel cyclin D partner. *Mol Cell Biol.* 1994; 14(3):2077-2086.(Clone-specific: Western blot)
 Sherr CJ. Mammalian G1 cyclins. *Cell.* 1993; 73(6):1059-1065.(Biology)

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