Technical Data Sheet

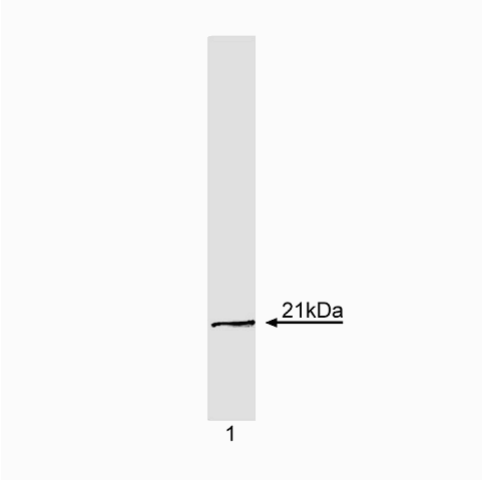
Purified Mouse Anti-Human p21

Product Information

Material Number:	**554262**
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	2G12
Immunogen:	Human p21 fusion protein
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Target MW:	21 kDa
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The p21 protein belongs to a class of tumor suppressors including p16 and p27 which control progression through the cell cycle by inhibiting the activity of cyclin-cdk complexes. p21 is also known as senescent cell-derived inhibitor 1 (Sdi1), wild-type p53-activated fragment 1 (Waf1), Cdk-interacting protein 1 (Cip1), p21, and p53-regulated inhibitor of Cdks (Pic1). The 2.1 kb cDNA coding for p21 was first cloned from a library made from senescent normal human foreskin fibroblasts. When introduced into proliferating foreskin fibroblasts it causes inhibition of DNA synthesis and cell cycle arrest. The p21 mRNA is expressed at higher levels in senescent fibroblasts than in actively growing cells. The resultant protein has a calculated molecular weight of 18 kDa and runs at 21 kDa in SDS/PAGE. p21 is believed to function by inhibiting the kinase activity of the cyclin-cdk complexes to which it binds. p53 has been shown to cause the induction of p21 gene, presumably by recognizing a p53 binding site identified in the promoter of the p21 gene. Clone 2G12 recognizes human p21. A full-length human p21 fusion protein was expressed in bacteria and used as immunogen. Mice were immunized and hybridomas were selected for reactivity against p21 by ELISA and western blot analysis.



Western blot analysis of p21 expression. *Lysates from MCF-7 cells (50 µg/lane) were probed with anti- human p21 (clone 2G12, Cat. No. 554262) followed by alkaline phosphatase labeled anti-mouse second-step polyclonal antibodies. The antibody recognizes p21 as a 21 kDa protein.*

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
Immunohistochemistry-paraffin	Tested During Development
Immunoprecipitation	Tested During Development

Recommended Assay Procedure:

Applications include immunoprecipitation. (1-2 µg/one million cells), western blot analysis (1-2 µg/ml) and immunohistochemistry of antigen unmasked, paraffin-embedded tissue sections (5-20 µg/ml). MCF-7 human breast carcinoma cells (ATCC HTB 22) are suggested as a positive control. WI-38 human lung fibroblasts (ATCC CCL 75) treated with doxorubin (Adriamycin) can also be used as a positive control.

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
611548	MCF7 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

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