

Technical Data Sheet

Purified Mouse Anti-Human p107

Product Information

Material Number:	554209
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	SD9
Immunogen:	Human Full-length p107 Recombinant Protein
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Target MW:	107 kDa
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

p107 is a cellular protein that, like the retinoblastoma protein (Rb), can bind SV40 large T antigen and adenovirus E1A. It was originally described as an E1A-associated protein that was detected in extracts of the 293 adenovirus transformed human kidney cell line. p107 and Rb share sequence homology which mainly extends throughout their large T/E1A binding pockets. In cells that do not contain the viral oncogenes, p107 and Rb associate, independently, with cellular E2F. E2F, originally identified as an activator of the adenovirus E1A promoter, is a transcription factor. It is believed that E2F plays a role in the control of cellular genes that respond to proliferation signals. In vivo, the large T/E1A binding pocket of Rb, associates with E2F primarily in G1 and S phase. p107 forms two complexes with E2F, one in S phase with cdk2 and cyclin A, and one in G1 phase with cdk2 and cyclin E. In vitro, the pocket regions of p107 and Rb associate with the same set of proteins, except that p107 also associates with two additional proteins, one of which is cyclin A. Since p107 shares structural and biochemical features with Rb it has been suggested that p107, like Rb, is a tumor suppressor gene product; however, the biological function of p107 remains speculative. The SD9 clone has been reported to be crossreactive on monkey and mouse p107. It reportedly does not crossreact with Rb. Reports of epitope mapping have shown that SD9 recognizes a region between amino acids 414-653 of human p107.

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
Gel shift	Reported
Immunoprecipitation	Reported

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

The following cell lines have been reported to be positive for p107 expression: (1) 293 (ATCC CRL-1573), (2) CEM (ATCC CCL-119), (3) Saos-2 (ATCC HTB-85), and (4) KHOS-240S (ATCC CRL-1545).

Note: For the immunoprecipitation application, cyclin A (55 kDa) and cdk2 (33 kDa) have been reported to co-immunoprecipitate with p107.

Suggested Companion Products

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

Product Notices

- Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

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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

- Beijersbergen RL, Hijmans EM, Zhu L, Bernards R. Interaction of c-Myc with the pRb-related protein p107 results in inhibition of c-Myc-mediated transactivation. *EMBO J.* 1994; 13(17):4080-4086.(Biology: Immunoprecipitation)
- 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)
- Chittenden T, Livingston DM, DeCaprio JA. Cell cycle analysis of E2F in primary human T cells reveals novel E2F complexes and biochemically distinct forms of free E2F. *Mol Cell Biol.* 1993; 13(7):3975-3983.(Biology: Gel shift)
- Dyson N, Dembski M, Fattaey A, Ngwu C, Ewen M, Helin K. Analysis of p107-associated proteins: p107 associates with a form of E2F that differs from pRB-associated E2F-1. *J Virol.* 1993; 67(12):7641-7647.(Biology: Immunoprecipitation, Western blot)
- Fattaey AR, Harlow E, Helin K. Independent regions of adenovirus E1A are required for binding to and dissociation of E2F-protein complexes. *Mol Cell Biol.* 1993; 13(12):7267-7277.(Biology: Immunoprecipitation)
- Lee JS, Galvin KM, See RH, et al. Relief of YY1 transcriptional repression by adenovirus E1A is mediated by E1A-associated protein p300. *Genes Dev.* 1995; 9(10):1188-1198.(Biology: Western blot)
- Lees JA, Saito M, Vidal M, et al. The retinoblastoma protein binds to a family of E2F transcription factors. *Mol Cell Biol.* 1993; 13(12):7813-7825.(Biology: Immunoprecipitation)
- Schneider JW, Gu W, Zhu L, Mahdavi V, Nadal-Ginard B. Reversal of terminal differentiation mediated by p107 in Rb-/- muscle cells. *Science.* 1994; 264(5164):1467-1471.(Biology: Western blot)
- Wu CL, Zukerberg LR, Ngwu C, Harlow E, Lees JA. In vivo association of E2F and DP family proteins. *Mol Cell Biol.* 1995; 15(5):2536-2546.(Biology: Immunoprecipitation)
- Zhu L, van den Heuvel S, Helin K, et al. Inhibition of cell proliferation by p107, a relative of the retinoblastoma protein. *Genes Dev.* 1993; 7(7A):1111-1125.(Biology: Immunoprecipitation)