Technical Data Sheet

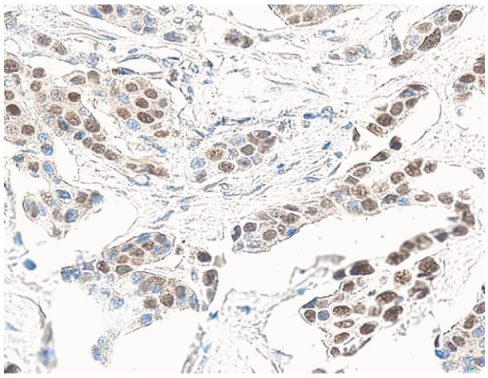
Purified Mouse Anti-Human p53

Product Information

Material Number:	**554170**
Size:	0.25 mg
Concentration:	0.5 mg/ml
Clone:	PAb 1801
Immunogen:	Recombinant fusion protein
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Target MW:	53 kDa
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The gene for the nuclear phosphoprotein p53 is the most commonly mutated gene yet identified in human cancers. Missense mutations occur in tumors of the colon, lung, breast, ovary, bladder and several other organs. The mutant p53 is over-expressed in a variety of transformed cells and it forms specific complexes with several viral oncogenes including SV40 large T, E1B from adenovirus and E6 from human papilloma virus. Recent data suggest that wild type p53 plays a role as a checkpoint protein for DNA damage during the S-phase of the cell cycle. However, it is still unclear whether point mutated forms of p53 are simple null mutants and/or dominant negatively acting proteins. p53 migrates at a reduced molecular weight of 53 kDa. Clone PAb 1801 recognizes an epitope between amino acids 32-79 in the N-terminal domain of human wild type and mutant p53 antibody. It does not cross-react with p53 from other species. A truncated recombinant human p53 fusion protein was used as immunogen.



Anti-human p53. *Formalin-fixed, paraffin-embedded tissue section of breast carcinoma stained for p53 (clone PAb 1801, Cat. No. 554170) using a DAB chromogen and Hematoxylin counterstain.*

Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunohistochemistry-formalin (antigen retrieval required)	Tested During Development
Immunoprecipitation	Tested During Development
Immunohistochemistry-frozen	Tested During Development

Recommended Assay Procedure:

Applications include western blot analysis (1-2 µg/ml), immunoprecipitation (1-2 µg/1 x 10^6 cells), immunofluorescence microscopy of cultured cells, immunohistochemistry of frozen (5-20 µg/ml), and antigen-unmasked paraffin-embedded tissue sections (5-20 µg/ml). Positive control cell lines include SK-BR-3 human breast carcinoma cells (ATCC HTB-30), and A431 human vulval carcinoma cells (ATCC CRL-1555). COS-7 SV40 transformed monkey kidney cells (ATCC CRL-1651) or another SV40-transformed cell line are also useful as positive controls for detecting p53. MCF-7 human breast carcinoma cells (ATCC HTB-22) are suggested as a negative control. Positive immunostaining is seen in a high proportion of breast and colon carcinomas. p53 staining is not typically detected in normal skin, brain, kidney, lung, stomach or breast tissue.

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. 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.
3. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Baker SJ, Markowitz S, Fearon ER, Willson JK, Vogelstein B. Suppression of human colorectal carcinoma cell growth by wild-type p53. *Science.* 1990; 249(4971):912-915. (Clone-specific: Immunofluorescence)

Banks L, Matlashewski G, Crawford L. Isolation of human-p53-specific monoclonal antibodies and their use in the studies of human p53 expression. *Eur J Biochem.* 1986; 159(3):529-534. (Immunogen: Immunoprecipitation, Western blot)

Jacquemier J, Moles JP, Penault-Llorca F, et al. p53 immunohistochemical analysis in breast cancer with four monoclonal antibodies: comparison of staining and PCR-SSCP results. *Br J Cancer.* 1994; 69(5):846-852. (Clone-specific: Immunohistochemistry)

Legros Y, Lacabanne V, d'Agay MF, Larsen CJ, Pla M, Soussi T. Production of human p53 specific monoclonal antibodies and their use in immunohistochemical studies of tumor cells. *Bull Cancer.* 1993; 80(2):102-110. (Clone-specific: Western blot)

Porter PL, Gown AM, Kramp SG, Coltrera MD. Widespread p53 overexpression in human malignant tumors. An immunohistochemical study using methacarn-fixed, embedded tissue. *Am J Pathol.* 1992; 140(1):145-153. (Clone-specific: Immunohistochemistry)

Said JW, Barrera R, Shintaku IP, Nakamura H, Koeffler HP. Immunohistochemical analysis of p53 expression in malignant lymphomas. *Am J Pathol.* 1992; 141(6):1343-1348. (Clone-specific: Immunohistochemistry)

Vogelstein B. Cancer. A deadly inheritance. *Nature.* 1990; 348(6303):681-682. (Biology)

Vojtesek B, Bartek J, Midgley CA, Lane DP. An immunochemical analysis of the human nuclear phosphoprotein p53. New monoclonal antibodies and epitope mapping using recombinant p53. *J Immunol Methods.* 1992; 151(1-2):237-244. (Clone-specific: Immunofluorescence, Immunohistochemistry, Immunoprecipitation, Western blot)

Walker RA, Dearing SJ, Lane DP, Varley JM. Expression of p53 protein in infiltrating and in-situ breast carcinomas. *J Pathol.* 1991; 165(3):203-211. (Clone-specific: Immunohistochemistry)

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