

Product Information

Monoconal Anti-DNA-Dependent Protein Kinase (Catalytic Subunit)

Clone 42-psc

Purified Mouse Immunoglobulin

Product Number **D 4060**

Product Description

Monoclonal Anti-DNA-Dependent Protein Kinase (Catalytic Subunit) (mouse IgG1 isotype) is derived from the 42-psc hybridoma produced by the fusion of mouse myeloma cells and splenocytes from a mouse immunized with a DNA-dependent protein kinase (DNA-PK) purified from HeLa cells. This clone has also been termed 42-26 or 42-27. The antibody is purified from ascites fluid using protein G chromatography.

Monoclonal Anti-DNA-PK reacts specifically with the catalytic subunit of human DNA-PK (460 kDa). It may be used for the detection of DNA-PK by immunoblotting, immunofluorescence, immunoprecipitation, and immunohistochemistry. The epitope for the antibody maps in the C-terminal 2/3rd of DNA-PKcs.

DNA-dependent Protein Kinase (DNA-PK) consists of a 460 kDa catalytic subunit (DNA-PKcs) and a heterodimeric regulatory complex comprised of p70Ku and p80Ku (Ku autoantigen). DNA-PK phosphorylates the transcription factors Sp1, Oct1, p53, and SV40 large T antigen. DNA-PK is involved in repairing double strand DNA breaks. At the onset of apoptosis, DNA-PK is rapidly inactivated by cleavage of the catalytic subunit into smaller polypeptides. Proteolysis of DNA-PK is inhibited by the cysteine protease inhibitors, iodoacetamide and N-ethylmaleimide.

Reagent

Monoclonal Anti-DNA-Dependent Protein Kinase (Catalytic Subunit) is supplied as 200 µg/ml in 10 mM phosphate buffered saline (PBS), pH 7.4, containing 0.2% bovine serum albumin (BSA) and 0.09% sodium azide.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots at -20 °C. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

For immunoblotting, an antibody working concentration of 2-4 µg/ml is determined using LS174T cells.

For immunoprecipitation, the recommended use is 2 µg of monoclonal anti-DNA-PK, which precipitates DNA-PK from 1 mg of protein lysate.

For immunohistochemistry, an antibody working concentration of 2-4 µg/ml is recommended using paraffin-embedded, formalin-fixed tissues sections and high temperature antigen retrieval.

Note: In order to obtain the best results and assay sensitivity in various techniques and preparations we recommend determining optimal working dilutions by titration.

General References

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7. McConnell, K.R., et al., J. Immunol., **158**, 2083-2089 (1997).

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