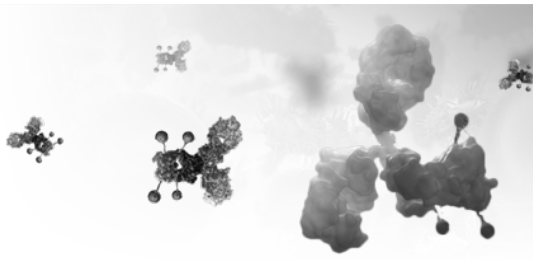

# Mouse anti-Human DNA-PK monoclonal antibody, clone 5G20D6 (CABT-B9196)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

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|---|---|
| **Immunogen** | Human DNA-PK (p350) aa. 277-531 Recombinant Protein |
| **Isotype** | IgG1, κ |
| **Source/Host** | Mouse |
| **Species Reactivity** | Human |
| **Clone** | 5G20D6 |
| **Purification** | The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. |
| **Conjugate** | Unconjugated |
| **Applications** | WB; IP |
| **Format** | Liquid |
| **Concentration** | 0.5 mg/ml |
| **Size** | 100 µg |
| **Buffer** | Aqueous buffered solution containing ≤0.09% sodium azide. |
| **Storage** | Store undiluted at 4°C. |

## BACKGROUND

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|---|---|
| **Introduction** | The ability of mammalian cells to detect and repair DNA damage is essential in maintaining the |

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|---|---|
| | structural integrity of their genes. Cells have evolved a number of repair pathways in order to repair different types of DNA lesions. DNA-dependent protein kinase (DNA-PK) is a serine-threonine protein kinase that is involved in DNA double-stranded break repair and variable-diversity-joining [V(D)J] recombination. To be active, DNA-PK must bind to double-stranded DNA containing broken ends, nicks, or single stranded gaps. Activated DNA-PK consists of three polypeptide components: Ku-80, Ku-70, and an ~350 kDa catalytic subunit (p350). First, Ku-80 and Ku-70 associate with each other to form a heterodimeric complex that binds to DNA breaks. By its interaction with DNA, Ku is thought to target p350 to sites of DNA damage. p350 then binds to the Ku-70/80 heterodimer (Ku) resulting in production of the active DNA-PK. Active DNA-PK phosphorylates a number of substrates in vitro, including proteins involved in the response of cells to DNA damage (p53, Ku, and plication protein A), and transcription factors (Sp1, Oct 1, Oct 2, SRF, Fos, and Jun). Clone 5G20D6 has been reported to recognize the 350 kDa catalytic subunit of DNA-PK. |
| **Keywords** | PRKDC; protein kinase, DNA-activated, catalytic polypeptide; HYRC; p350; DNAPK; DNPK1; HYRC1; IMD26; XRCC7; DNA-PKcs; DNA-dependent protein kinase catalytic subunit; p460; DNA-PK catalytic subunit; hyper-radiosensitivity of murine scid mutation, complementing 1; |

# GENE INFORMATION

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|---|---|
| **Entrez Gene ID** | 5591 |
| **UniProt ID** | P78527 |

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