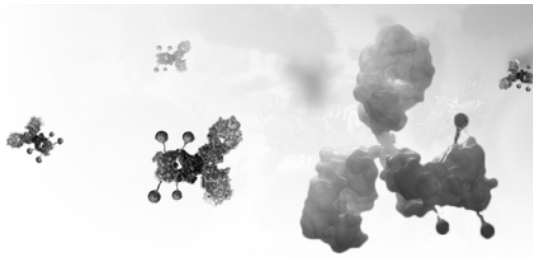

# Mouse anti-SV40 Large T Antigen monoclonal antibody, clone QBc 202 (CABT-B9329)

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

## PRODUCT INFORMATION

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|---|---|
| **Immunogen** | SV40-transformed BALB/c mouse cell lines |
| **Isotype** | IgG2a |
| **Source/Host** | Mouse |
| **Species Reactivity** | Viral |
| **Clone** | QBc 202 |
| **Purification** | The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. |
| **Conjugate** | Unconjugated |
| **Applications** | WB; IHC; IF; 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** | Simian virus 40 is a small DNA virus encoded by 5.2 kb of double-stranded DNA. SV40 large T |

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antigen (T-ag) is a multifunctional ~85 kD phosphoprotein, which is the sole viral protein required for SV40 replication. All other factors are provided by the infected host cell. In addition to its role in SV40 DNA replication, T-ag also causes transformation of susceptible cell lines. Studies of various mutant T-ag proteins have shown that the replication and transformation fractions of T-ag can be separated. The multifunctional nature of this protein has resulted in its use as a model system in a wide variety of disciplines. SV40 T-ag exercises negative regulation on the transcription of SV40 early mRNA by feedback inhibition and exerts positive regulation on transcription from the late promoter. In addition to transcriptional regulation, T-ag is involved in viral DNA replication. Specific biochemical functions required for DNA synthesis that are inherent to the T-ag include high-affinity binding to sites within the viral origin of DNA synthesis, and ATPase and helicase activities. Other functions attributed to T-ag include cellular transformation, induction of cellular DNA synthesis, induction of rRNA synthesis and provision of a host-range function for viral replication. However, all functions of T-ag are influenced by a wide range of post-translational modifications including phosphorylation, glycosylation, acetylation, acylation and adenylation. T-ag exists in monomeric as well as polymeric forms and associates with the tumor suppressor proteins p53 and Rb (retinoblastoma protein). Most of T-ag is transported to the nucleus, while a small fraction is localized at the cell surface. PAb 101 recognizes a C-terminal epitope within the last 190 amino acids of T-ag. PAb 101 was originally known as Clone 7. Studies have suggested that PAb 101 binds the strongest to mature T-ag. PAb 101 (i.e., Clone 7) was developed along with a panel of monoclonal antibodies where SV40-transformed BALB/c mouse cell lines (SVT2 or B4) were used as immunogens. The specificity of the antibody was originally characterized by a variety of techniques using SV40-infected and SV40-transformed cells.

**Keywords** Large T antigen; LT AG; LT; Middle T antigen; MT AG; MT; Small T antigen; ST AG; ST; SV40

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