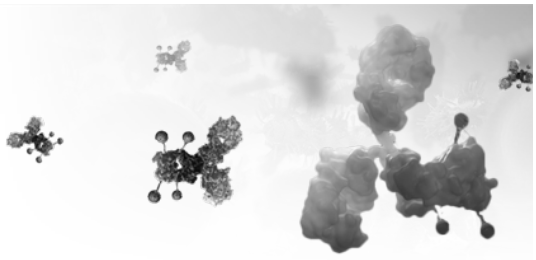

Mouse anti-SV40 Large T and Small t Antigens monoclonal antibody, clone QBc 209 [FITC] (CABT-B9327)

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

PRODUCT INFORMATION

Immunogen	SV40-transformed BALB/c mouse cells
Isotype	IgG2a
Source/Host	Mouse
Species Reactivity	Viral
Clone	QBc 209
Purification	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Conjugate	FITC
Applications	IF
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 and protected from prolonged exposure to light. Do not freeze.

BACKGROUND

45-1 Ramsey Road, Shirley, NY 11967, USA
Email: info@creative-diagnostics.com
Tel: 1-631-624-4882 Fax: 1-631-938-8221

Introduction	Simian virus 40 (SV40) is a small DNA virus encoded by 5.2 kb of double-stranded DNA. SV40 large T-antigen (T-ag) is a multifunctional ~85 kDa 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. 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, 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, 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 retinoblastoma protein (Rb). Most of T-ag is transported to the nucleus, while a small fraction is localized at the cell surface. Small t-Ag is a polypeptide which shares 82 N-terminal amino acids with large T antigen and has a unique C-terminal region.
Keywords	Large T antigen; LT AG; LT; Middle T antigen; MT AG; MT; Small T antigen; ST AG; ST; SV40

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