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SV-40

Mouse Monoclonal antibody(Mab)
Catalog # AD80427

Product Information

Application	IHC-P
Primary Accession	P03070
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	675K1D2
Calculated MW	81624

Additional Information

Gene ID	29031019
Other Names	Large T antigen, LT, LT-AG, 3.6.4.-, LT
Dilution	IHC-P~~N/A
Storage	Maintain refrigerated at 2-8°C.

Protein Information

Name	LT
Function	Isoform large T antigen is a key early protein essential for both driving viral replication and inducing cellular transformation. Plays a role in viral genome replication by driving entry of quiescent cells into the cell cycle and by autoregulating the synthesis of viral early mRNA. Displays highly oncogenic activities by corrupting the host cellular checkpoint mechanisms that guard cell division and the transcription, replication, and repair of DNA. Participates in the modulation of cellular gene expression preceeding viral DNA replication. This step involves binding to host key cell cycle regulators retinoblastoma protein RB1/pRb and TP53. Induces the disassembly of host E2F1 transcription factors from RB1, thus promoting transcriptional activation of E2F1-regulated S-phase genes. Inhibits host TP53 binding to DNA, abrogating the ability of TP53 to stimulate gene expression. Plays the role of a TFIID-associated factor (TAF) in transcription initiation for all three RNA polymerases, by stabilizing the TBP-TFIIA complex on promoters. Initiates viral DNA replication and unwinding via interactions with the viral origin of replication. Binds two adjacent sites in the SV40 origin. The replication fork movement is facilitated by Large T antigen helicase activity. Has processive 3'-5' DNA helicase activity which requires a short 3' single-stranded region and ATP; other (d)NTPs can partially replace ATP (PubMed:2826443, PubMed:2826446). Activates the transcription of viral late mRNA, through

	host TBP and TFIIA stabilization. Interferes with histone deacetylation mediated by HDAC1, leading to activation of transcription. May inactivate the growth-suppressing properties of the E3 ubiquitin ligase CUL7.
Cellular Location	Host nucleus