

SV-40
Mouse Monoclonal antibody(Mab)
Catalog # AD80427

Specification

SV-40 - Product info

Application
Primary Accession
Reactivity
Host
Clonality
Calculated MW

IHC-P
[P03070](#)
Human
Mouse
Monoclonal
81624

SV-40 - Additional info

Other Names

Large T antigen, LT, LT-AG, 3.6.4.-, LT

Storage

Maintain refrigerated at 2-8°C

SV-40 - 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.
Host nucleus

Cellular Location

SV-40 - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SV-40 - Images