

SV40 T Ag (Pab 108): sc-148

BACKGROUND

Simian virus SV40 has provided an important model for studies of cellular mechanisms involved in a malignant transformation. The major SV40 translational products include the large T antigen and the small T antigen, both of which are encoded by the early region of the SV40 viral genome. The large T antigen complexes with the p53 suppressor gene, resulting in its functional inactivation, thus promoting cell transformation. In addition, SV40 large T antigen binds DNA polymerase and the transcription factor AP-2. It also forms complexes with a second tumor suppressor gene-encoded protein, Rb 105. Binding of SV40 T antigen is specific for the "pocket" domain of Rb p105, which is also the binding site for the E2F cellular transcription factor.

REFERENCES

1. Lane, D.P., et al. 1979. T antigen is bound to a host protein in SV40-transformed cells. *Nature* 278: 261-263.
2. Crawford, L.V., et al. 1981. Detection of a common feature in several human tumor cell lines—a 53 kDa protein. *Proc. Natl. Acad. Sci. USA* 78: 41-45.
3. Sarnow, P., et al. 1982. Adenovirus E1B 58 kDa tumor antigen and SV40 Large T antigen are physically associated with the same 54 kDa cellular protein in transformed cells. *Cell* 28: 387-394.
4. Gurney, E.G., et al. 1986. Antigenic binding sites of monoclonal antibodies specific for simian virus 40 large T antigen. *J. Virol.* 57: 1168-1172.

SOURCE

SV40 T Ag (Pab 108) is a mouse monoclonal antibody raised against SV-40 transformed cell line B4 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SV40 T Ag (Pab 108) is available conjugated to agarose (sc-148 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-148 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-148 PE), fluorescein (sc-148 FITC), Alexa Fluor[®] 488 (sc-148 AF488), Alexa Fluor[®] 546 (sc-148 AF546), Alexa Fluor[®] 594 (sc-148 AF594) or Alexa Fluor[®] 647 (sc-148 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-148 AF680) or Alexa Fluor[®] 790 (sc-148 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

SV40 T Ag (Pab 108) is recommended for detection of the N-terminus of large SV40 T antigen, small SV40 T antigen and BK virus T antigen by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

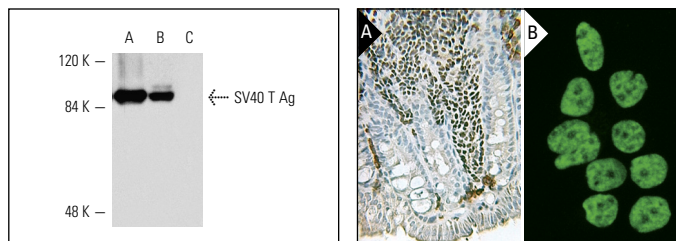
Molecular Weight of SV40 T Ag: 94 kDa.

Molecular Weight of SV40 small T antigen: 21 kDa.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



SV40 T Ag (Pab 108): sc-148. Western blot analysis of SV40 T Ag expression in MLZ (A), GM637 (B) and RAW 264.7 (C) whole cell lysates.

SV40 T Ag (Pab 108): sc-148. Immunoperoxidase staining of formalin-fixed, paraffin-embedded mouse colon tissue from transgenic mice over-expressing SV40 T-antigen from an intestine-specific promoter construct. Kindly provided by J. Gum, S. Crawley and S. Yang of the VA Medical Center, San Francisco (A). Immunofluorescence staining of methanol-fixed GM637 cells showing nuclear localization (B).

SELECT PRODUCT CITATIONS

1. Modi, S., et al. 2000. Protein expression of the RB-related gene family and SV40 large T antigen in mesothelioma and lung cancer. *Oncogene* 19: 4632-4639.
2. Chiu, I.M., et al. 2000. Tumorigenesis in transgenic mice in which the SV40 T antigen is driven by the brain-specific FGF1 promoter. *Oncogene* 19: 6229-6239.
3. Nguyen, C.L., et al. 2012. Nek4 regulates entry into replicative senescence and the response to DNA damage in human fibroblasts. *Mol. Cell. Biol.* 32: 3963-3977.
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5. van den Akker, G.G., et al. 2014. Novel immortal human cell lines reveal subpopulations in the nucleus pulposus. *Arthritis Res. Ther.* 16: R135.
6. Gordon, K., et al. 2014. Immortality, but not oncogenic transformation, of primary human cells leads to epigenetic reprogramming of DNA methylation and gene expression. *Nucleic Acids Res.* 42: 3529-3541.
7. Hoermann, G., et al. 2014. CD52 is a molecular target in advanced systemic mastocytosis. *FASEB J.* 28: 3540-3551.
8. Kurahashi, T., et al. 2014. Reductive detoxification of acrolein as a potential role for aldehyde reductase (AKR1A) in mammals. *Biochem. Biophys. Res. Commun.* 452: 136-141.
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RESEARCH USE

For research use only, not for use in diagnostic procedures.