

# SV40 KT3 tag (KT3): sc-58664

## BACKGROUND

SV40 KT3 tag is derived from the carboxy-terminus of Simian Virus 40 large T antigen. These constructs contain a C-terminal KT3 tag, which is an 11 amino-acid epitope. Because SV40 is an oncogenic DNA tumor virus, it provides an important model system for understanding cellular events critical to malignant transformation. Evidence demonstrates that SV40 T antigens induce transformation through functional inactivation of the anti-oncogenic protein p53. The early region of the SV40 genome encodes the SV40 T antigen. The large T antigen binds DNA and complexes with p53, a protein required for viral DNA replication during lytic growth. More specifically, the large T antigen binds DNA polymerase and the transcription factor AP-2, forming a complex with the P105 product of the retinoblastoma susceptibility gene.

## REFERENCES

1. Harlow, E., et al. 1981. Monoclonal antibodies specific for Simian Virus 40 tumor antigens. *J. Virol.* 39: 861-869.
2. MacArthur, H. and Walter, G. 1984. Monoclonal antibodies specific for the carboxy-terminus of Simian Virus 40 large T antigen. *J. Virol.* 52: 483-491.
3. Kwatra, M.M., et al. 1995. Immunoaffinity purification of epitope-tagged human  $\beta_2$ -adrenergic to homogeneity. *Protein Expr. Purif.* 6: 717-721.
4. Lilyestrom, W., et al. 2006. Crystal structure of SV40 large T antigen bound to p53: interplay between a viral oncoprotein and a cellular tumor suppressor. *Genes Dev.* 20: 2373-2382.
5. Vilchez, R.A., et al. 2006. Simian Virus 40 in posttransplant lymphoproliferative disorders. *Hum. Pathol.* 37: 1130-1136.
6. Noutsopoulos, D., et al. 2006. SV40 large T antigen upregulates the retrotransposition frequency of viral-like 30 elements. *J. Mol. Biol.* 361: 450-461.
7. Chen, P.M., et al. 2006. High prevalence of SV40 infection in patients with nodal non-Hodgkin's lymphoma but not acute leukemia independent of contaminated polio vaccines in Taiwan. *Cancer Invest.* 24: 223-228.

## SOURCE

SV40 KT3 tag (KT3) is a mouse monoclonal antibody raised against a synthetic peptide of SV40 KT3.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SV40 KT3 tag (KT3) is available conjugated to agarose (sc-58664 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-58664 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-58664 PE), fluorescein (sc-58664 FITC), Alexa Fluor<sup>®</sup> 488 (sc-58664 AF488), Alexa Fluor<sup>®</sup> 546 (sc-58664 AF546), Alexa Fluor<sup>®</sup> 594 (sc-58664 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-58664 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-58664 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-58664 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA

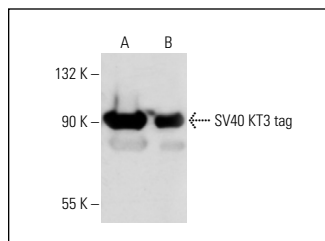
## APPLICATIONS

SV40 KT3 tag (KT3) is recommended for detection of KT3 tag of SV40 by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



SV40 KT3 tag (KT3): sc-58664. Western blot analysis of SV40 KT3 tag expression in GM637 (A) and XP12RO (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Eguchi, R., et al. 2011. Fish oil consumption prevents glucose intolerance and hypercorticotestosterone in footshock-stressed rats. *Lipids Health Dis.* 10: 71.
2. Spector, M.E., et al. 2017. E6 and E7 antibody levels are potential biomarkers of recurrence in patients with advanced-stage human papillomavirus-positive oropharyngeal squamous cell carcinoma. *Clin. Cancer Res.* 23: 2723-2729.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.