Simian Virus 40, Baylor (SVB2E-WT)

Catalog No. NR-51200

For research use only. Not for human use.

Contributor:
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Manufacturer:
BEI Resources

Product Description:
Virus Classification: *Polyomaviridae, Betapolyomavirus*
Species: Simian Virus 40
Strain/Isolate: Baylor (SVB2E-WT) [also referred to as Baylor, B-2, Baylor-2, SVB or SVB2E (WT)][1-4]
Original Source: SV40, Baylor (SVB2E-WT) was isolated in 1961 from a type 2 Sabin oral polio vaccine prepared in 1956.[1-4]
Comments: SV40, Baylor (SVB2E-WT) is a variant with complex regulatory region with two copies of the 72 base pairs enhancer element in the noncoding regulatory region of the large T antigen of the virus.[2-4] The complete genome of SV40, Baylor (SVB2E-WT) has been sequenced (GenBank: AF155358).[3]

SV40 is a member of the *Polyomaviridae* family which was discovered in 1960 as a contaminant in early forms of some viral vaccines prepared using primary cultures of rhesus monkey kidney cells.[5,6] The SV40 genome is a 5 kb circular double-stranded DNA which, in addition to some other proteins, encodes for two tumor antigens, large T and small t, generated by alternative splicing.[5] Large T antigen is a complex, multifunctional oncoprotein that is required for making the cellular environment conducive to viral DNA replication. The ability of the large T antigen to stimulate cell entry into the S phase of the cell cycle and initiate viral DNA replication makes it a major transforming protein of SV40.[7,8] Genetic variants of SV40 exist which have major genetic variations localized in two regions of the viral genome: the non-coding regulatory region and the C terminus of the large T antigen, referred to as the variable region.[3] SV40 is used extensively to study virus-induced cancers and viral effects on eukaryotic cellular processes.

Material Provided:
Each vial contains approximately 1 mL of clarified cell lysate and supernatant from *Cercopithecus aethiops* kidney fibroblast cells infected with SV40, Baylor (SVB2E-WT).

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:
NR-51200 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

Growth Conditions:
Host: *Cercopithecus aethiops* kidney fibroblast cells (CV-1; ATCC® CCL-70™)
Growth Medium: Eagle's Minimum Essential Medium containing Earle's Balanced Salt Solution, non-essential amino acids, 2 mM L-glutamine, 1 mM sodium pyruvate and 1.5 g/L of sodium bicarbonate supplemented with 2% fetal bovine serum, or equivalent
Infection: Cells should be 80% to 90% confluent
Incubation: 9 to 16 days at 37°C and 5% CO_2
Cytopathic Effect: Cell rounding, vacuolization and sloughing

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Simian Virus 40, Baylor (SVB2E-WT), NR-51200."

Biosafety Level: 2
Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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References:

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2. Stroller, V., et al. "Influence of the Viral Regulatory Region on Tumor Induction by Simian Virus 40 in Hamsters" J. Virol. 82 (2008): 871-879. PubMed: 17977966.
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4. Lednicky, J. A. and J. S. Butel. "Tissue Culture Adaptation of Natural Isolates of Simian Virus 40: Changes Occur in Viral Regulatory Region but Not in Carboxy-Terminal Domain of Large T-Antigen." J. Gen. Virol. 78 (1997): 1697-1705. PubMed: 9225047.
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6. Sweet, B. H. and M. R. Hilleman. "The Vacuolating Virus, S.V. 40." Proc. Soc. Exp. Biol. Med. 105 (1960): 420–427. PubMed: 13774265.
7. Ahuja, D., M. T. Sáenz-Robles and J. M. Pipas. "SV40 Large T Antigen Targets Multiple Cellular Pathways to Elicit Cellular Transformation." Oncogene 24 (2005): 7729–7745. PubMed: 16299533.
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