Product Information Sheet for NR-51201

Simian Virus 40, 776* (776-2E WT)

Catalog No. NR-51201

For research use only. Not for human use.

Contributor:

Janet S. Butel, Professor and Chair Emeritus, Department of Molecular Virology and Microbiology, Baylor College of Medicine, Houston, Texas, USA

Manufacturer:

BEI Resources

Product Description:

Virus Classification: *Polyomaviridae, Betapolyomavirus*
Species: Simian Virus 40
Strain/Isolate: 776* (776-2E WT) [also referred to as 776* or 776-2E (WT)][1]
Original Source: SV40, 776* (776-2E WT) was constructed by cloning SV40, 776 sequence from pCV21-0 vector into the *Eco*RI site of the same vector.[1-3] SV40, 776* differs from SV40, 776 (GenBank: J02400) by one nucleotide at position 948.[1,3] SV40, 776 is a reference strain for SV40 and was initially isolated from a contaminated adenovirus type 1 seed stock in 1960.[4]
Comments: The complete genome of SV40, 776* (776-2E WT) has been sequenced (GenBank: AF316139).[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.[4,5] 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.[4] 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.[6,7] 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, 776* (776-2E WT).

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

Packaging/Storage:

NR-51201 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, 776* (776-2E WT), NR-51201."

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.

Disclaimers:

You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at www.beiresources.org.

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

Use Restrictions:

This material is distributed for internal research, non-commercial purposes only. This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

References:

1. Butel, J. S., Personal Communication.
2. Lednicky, J. and W. R. Folk. "Two Synthetic Sp1-Binding Sites Functionally Substitute for the 21-Base-Pair Repeat Region to Activate Simian Virus 40 Growth in CV-1 Cells" J. Virol. 66 (1992): 6379-6390. PubMed: 1328672.
3. Forsman, Z. H., et al. "Phylogenetic Analysis of Polyomavirus Simian Virus 40 from Monkeys and Humans Reveals Genetic Variation." J. Virol. 78 (2004): 9306-9316. PubMed: 15308725.
4. Stewart, A. R., et al. "Identification of a Variable Region at the Carboxy Terminus of SV40 Large T-Antigen." Virology 221 (1996): 355–361. PubMed: 8661447.
5. Sweet, B. H. and M. R. Hilleman. "The Vacuolating Virus, S.V. 40." Proc. Soc. Exp. Biol. Med. 105 (1960): 420–427. PubMed: 13774265.
6. 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.
7. Butel, J. S. "Viral Carcinogenesis: Revelation of Molecular Mechanisms and Etiology of Human Disease." Carcinogenesis 21 (2000): 405–426. PubMed: 10688861.

Support Provided by NIAID

BEI Resources
www.beiresources.org

E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898