Product Information Sheet for NR-51202

Simian Virus 40, K661

Catalog No. NR-51202

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: K661
Original Source: SV40, K661 was isolated from simian immunodeficiency virus (SIV)-infected rhesus monkey brain in 1998.[1-3]
Comments: SV40, K661 is a variant with an archetype-length regulatory region lacking a duplication within the G/C-rich segment and containing a single copy of the 72 base pairs enhancer element in the noncoding regulatory region of the large T antigen of the virus.[2] SV40, K661 is naturally severely attenuated for microRNA expression due to a defect in the processing of the primary microRNA transcript.[1,4] The complete genome of SV40, K661 has been sequenced (GenBank: AF038616).[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 kilobase 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, K661.

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

Packaging/Storage:
NR-51202 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, K661, NR-51202."

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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4. Chen, C. J., et al. "Naturally Arising Strains of Polyomaviuses with Severely Attenuated microRNA Expression." J. Virol. 88 (2014): 12683-12693. PubMed: 25142594.
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