Porcine Sapovirus, Cowden (Tissue Culture Adapted)

Catalog No. NR-50552

For research use only. Not for human use.

Contributor and Manufacturer:
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Product Description:

Virus Classification: Calciviridae, Sapovirus
Species: Porcine Sapovirus
Strain: Cowden

Original Source: Porcine sapovirus (PSV), Cowden was isolated in Wayne County, Ohio, USA in 1988 from the large intestinal contents of a 27 day old diarrheic nursing pig, and adapted to growth in cell culture by serial passage in a continuous cell line in the presence of an intestinal content fluid filtrate from uninfected gnotobiotic pigs. The complete genome of tissue culture adapted PSV, Cowden has been sequenced (GenBank: AF182760).

Comments: PSV, previously known as porcine enteric calcivirus (PEC), is a member of the family Calciviridae. Calciviridae are small non-enveloped, positive sense, single-stranded RNA viruses classified into five genera including noroviruses and sapoviruses. Noroviruses are the leading cause of nonbacterial gastroenteritis in humans, and sapoviruses are enteric pathogens affecting humans and swine. Sapoviruses are highly diverse and divided into many different genogroups. PSV, Cowden belongs to genogroup III and is one of only a few culturable enteric calciviruses. Bile acids are essential for in vitro propagation of PSV, and may act by a mechanism involving down-regulation of IFN-mediated STAT1 activation. Four amino acid substitutions in the capsid protein (VP1) have been identified as critical for the cell culture adaptation of the virus.

Material Provided:
Each vial contains approximately 1 mL of clarified cell lysate and supernatant from Sus scrofa kidney epithelial cells infected with tissue culture adapted PSV, Cowden.

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

Packaging/Storage:
NR-50552 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: Sus scrofa kidney epithelial cells (LLC-PK, ATCC® CL-101™)
Growth Medium: Eagle’s Minimum Essential Medium with Earle’s Balanced Salt Solution, non-essential amino acids, 2 mM L-glutamine, 1 mM sodium pyruvate, and 1500 mg/L sodium bicarbonate, 2% fetal bovine serum, 1% non-essential amino acids, and 50 μM bile acid (glycochenodeoxycholic acid).
Infection: Cells should be 80% to 90% confluent
Incubation: 4-5 days at 37°C and 5% CO2
Cytopathic Effect: Cell rounding and detachment

Citation: Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: Porcine Sapovirus, Cowden (Tissue Culture Adapted), NR-50552.”

Biosafety Level: 2


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References:

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