

Q&A regarding our SARS-CoV and SARS-CoV-2 S protein pseudotyped lentiviruses

1) Which gene is inserted other than the GFP or Luc reporter gene?

Answer: The GFP vector has also puromycin resistant gene. The Luc reporter vector has Luciferase and Tat Gene. The Luc reporter construct have the retrovirus LTR promoter to drive the expression of Luc expression. For the GFP vector, GFP is expressed from the CMV promoter, and Puromycin is expressed from the hPGK promoter.

2) Is this pseudovirus infective? Only in Vero cells, or in primary airway cells?

Answer: The pseudo virus can infect cells and express a reporter gene (GFP or Luc). The pseudo virus cannot replicate, can be used in common research labs that use lentiviral vector. They can enter cells through SARS-CoV or SARS-CoV-2 S protein interaction with ACE2. Following entering cells, GFP or Luc will be expressed. But there is no virus replication, No progeny viral particles released. Thus, the virus particles can be used in a common research lab doing BSL2 practices.

3) Do you provide vector map?

Answer: We will provide a vector map following ordering of the products.

4) How did you attach SARS-CoV S protein to the vector of this product?

Answer: The S protein was attached to the virion particle through S protein expression vector co-transfection during particle assembly.

5) Does it express an intact spike protein complex and enter cells in an ACE2-dependent manner?

Answer: Yes, for the S protein, full length, intact protein and use ACE2.

It gets into the cells and express GFP or Luciferase. You can track viral entry and drugs and antibodies blocking viral entry.

6) How was CoV2-01 made? Are you using psPAX2 for gag/pol expression? What transfers plasmid?

Answer: We used homemade vector expressing gag/pol. If customer wants to use their own vector, we can do customized service. HiV -based lenti , Concentrated by ultracentrifugation.

7) Does the pseudotyped lentiviral particles indicate the recombinant virus whose S protein or VSV-G protein is substituted by SARS-CoV-2's ones?

Answer: The lentiviral pseudo virus is like the VSV-G pseudo typed virus. The only difference is that the VSV-G is replaced by SARS-CoV2 S protein

8) Do you also have replication-defective lentiviral vectors?

Answer: We have not checked airway and primary cells. We have replication-defective lentiviral vector.

9) Is the genome of lentiviral pseudo virus the same as the wild type of lentivirus? Is the gene of VSV-G also replaced by SARS-CoV-2 S protein gene? Or is the gene of VSV-G simply deleted?

Answer: The genome of the pseudo virus is NOT the same as the wild type lentivirus. The genome is either the GFP or the Luc Reporter gene.

For the SARS-Cov or CoV-2 S gene pseudo typed viruses. There is No VSV-G gene at all.