



# SARS-CoV-2 (2019-nCoV) Spike S1 Gene Lentiviral ORF cDNA clone expression plasmid, C-GFPSpark tag (Codon Optimized)

Catalog Number: VG40591-ACGLN

## General Information

**Official Symbol :** Spike  
**Synonym :** Spike  
**Source :** SARS-CoV-2  
**cDNA Size:** 2787bp(cDNA Size= Gene + linker +Tags)  
**Plasmid** pLV-2019-nCOV-S1-GFPSpark

## Description

**Lot :** Please refer to the label on the tube

### Sequence Description :

A number of silent mutations were introduced into the DNA sequence in order to increase its protein expression level in mammalian cell system. The translated amino acid sequence is identical with YP\_009724390.1(1-685aa)

**Restriction site:** KpnI + NotI(6.54kb+2.79kb)

**Vector :** pLV-C-GFPSpark

### Shipping carrier :

Each tube contains approximately 10 µg of lyophilized plasmid.

### Storage :

The lyophilized plasmid can be stored at ambient temperature for three months.

### Quality control :

The plasmid is confirmed by full-length sequencing with primers in the sequencing primer list.

### Sequencing primer list :

pLen-F: 5' CTCGTTTAGTGAACCGTCAGAATT 3'

pLen-R : 5' GAACCGGAACCCCTTAAACATGT 3'

pLen-F and pLen-R are designed by Sino Biological Inc. Customers can order the primer pair from any oligonucleotide supplier.

## Plasmid Resuspension protocol

1. Centrifuge at 5,000 × g for 5 min.
2. Carefully open the tube and add 100 µl of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin to concentrate the liquid at the bottom. Speed is less than 5000 × g.
5. Store the plasmid at -20 °C.

### The plasmid is ready for:

- Restriction enzyme digestion
- PCR amplification
- *E. coli* transformation
- DNA sequencing

## *E.coli* strains for transformation (recommended but not limited)

Most commercially available competent cells are appropriate for the plasmid, e.g. TOP10, DH5α and TOP10F', Stbl3.



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## Vector Information

Sino Biological pLV lentiviral vectors are the third generation lentivirus vector, and which contained specific elements to improve transgene expression, virus titer, biosafety. The vectors contain the following elements:

- 1) CMV2 promoter: The enhancer CMV promoter promotes a high level of expression of your gene of interest in a wide variety of cell lines.
- 2) 3' LTR: Required for viral reverse transcription; self-inactivating 3' LTR with deletion in U3 region prevents formation of replication-competent viral particles after integration into genomic DNA.
- 3) 5'LTR: U5 long terminal repeat is required for viral packaging and transcription. The 5' LTR promoter is replaced by a CMV promoter to prevent replication of the viral sequences.
- 4) RRE: Rev response element binds gag and increases titers by promoting the nuclear export of unspliced viral genomic RNA.
- 5) cPPT/cTS: Central polypurine tract (includes DNA Flap region) increases nuclear translocation and integration of transduced viral genome efficiency.

|                              |                   |
|------------------------------|-------------------|
| Vector Name                  | pLV-C-GFPSpark    |
| Vector Size                  | 7395bp            |
| Vector Type                  | Lentiviral Vector |
| Promoter                     | CMV               |
| Antibiotic Resistance        | Ampicillin        |
| Protein Tag                  | GFPSpark          |
| Selection In Mammalian Cells | None              |

## Physical Map of Plasmid

