

# Human GREM1 ORF mammalian expression plasmid, N-His tag



**Sino Biological Inc.**  
Biological Solution Specialist

Catalog Number: **HG10632-NH**

## General Information

**Gene :** gremlin 1, cysteine knot superfamily, homolog (*Xenopus laevis*)  
**Official Symbol :** GREM1  
**Synonym :** DRM, PIG2, DAND2, IHG-2, GREMLIN, CKTSF1B1, MGC126660  
**Source :** Human  
**cDNA Size:** 555bp  
**RefSeq :** NM\_013372.5

## Description

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

**Vector :** pCMV3-SP-N-His

### 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 :

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pCMV3-F: 5' CAGGTGTCCACTCCCAGGTCCAAG 3'

pcDNA3-R : 5' GGCAACTAGAAGGCACAGTCGAGG 3'

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Or

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Forward T7 : 5' TAATACGACTCACTATAGGG 3'

ReverseBGH : 5' TAGAAGGCACAGTCGAGG 3'

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pCMV3-F and pcDNA3-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'.

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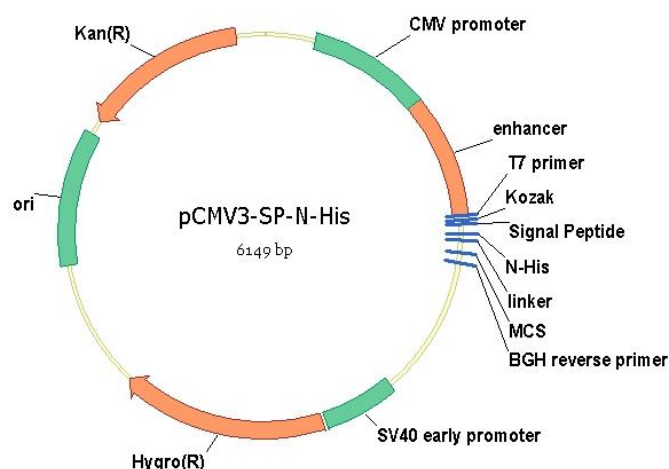
## Vector Information

All of the pCMV vectors are designed for high-level stable and transient expression in mammalian hosts. High-level stable and non-replicative transient expression can be carried out in most mammalian cells. The vectors contain the following elements:

- Human enhanced cytomegalovirus immediate-early (CMV) promoter for high-level expression in a wide range of mammalian cells.
- Hygromycin resistance gene for selection of mammalian cell lines.
- A Kozak consensus sequence to enhance mammalian expression.

Vector Name	pCMV3-SP-N-His
Vector Size	6149bp
Vector Type	Mammalian Expression Vector
Expression Method	Constitutive, Stable / Transient
Promoter	CMV
Antibiotic Resistance	Kanamycin
Selection In Mammalian Cells	Hygromycin
Protein Tag	His

## Physical Map



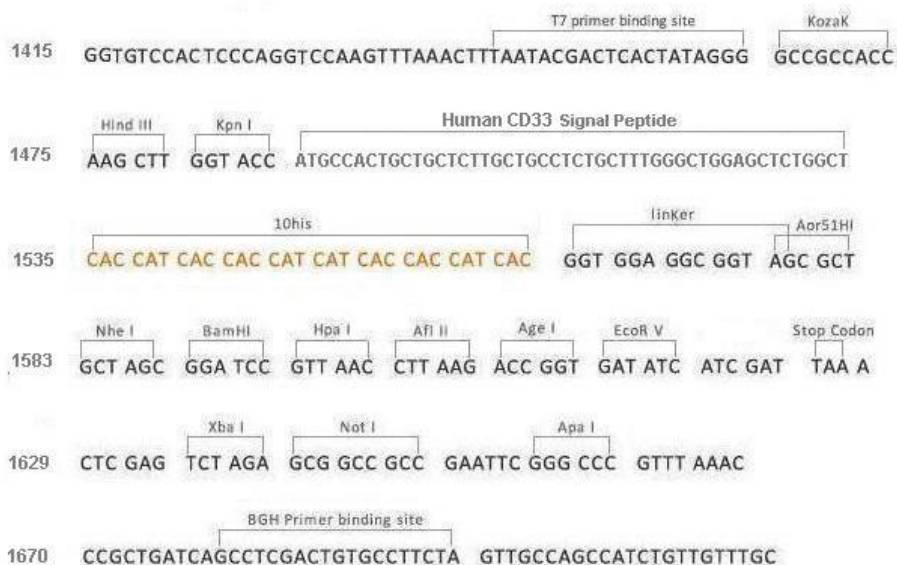
### Comments for pCMV3-SP-N-His:

CMV promoter: bases 250-837  
 enhancer: bases 838-1445  
 SV40 early promoter: bases 2390-2759  
 Hygromycin ORF: bases 2777-3802  
 pUC origin: bases 4445-5118  
 Kanamycin ORF: bases 5192-6007

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Protein Tag	His
Sequencing Primer	Forward:T7(TAATACGACTCACTATAGGG) Reverse:BGH(TAGAAGGCACAGTCGAGG)

## Schematic of pCMV3-SP-N-His Multiple Cloning Sites



pCMV3-SP-N-His is recommended for constructing the N-His tag secretory and membrane proteins expression vector which containing a naïve signal peptide. An universal signal peptide is used to instead the naïve signal peptide.