Mouse IL6 ORF mammalian expression plasmid, N-His tag

Catalog Number: MG50136-NH

General Information

Gene: interleukin 6
Official Symbol: IL6
Synonym: IL-6
Source: Mouse
cDNA Size: 636bp
RefSeq: NM_031168.1
Plasmid: pCMV3-His-mIL6

Description

Lot: Please refer to the label on the tube

Sequence Description:
Identical with the Gene Bank Ref. ID sequence.

Restriction site: KpnI + XbaI (6kb + 0.66kb)

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:

<table>
<thead>
<tr>
<th>Primer</th>
<th>Sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>pCMV3-F</td>
<td>5’ CAGGTGTCCACTCCAGGTCCAAG 3’</td>
</tr>
<tr>
<td>pcDNA3-R</td>
<td>5’ GGCAACTAGAAGGCACAGTCGAGG 3’</td>
</tr>
</tbody>
</table>

Or

<table>
<thead>
<tr>
<th>Primer</th>
<th>Sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward T7</td>
<td>5’ TAATACGACTCAGTGAGG 3’</td>
</tr>
<tr>
<td>ReverseBGH</td>
<td>5’ TAGAAGGCACAGTCGAGG 3’</td>
</tr>
</tbody>
</table>

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’.
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.

Physical Map of Plasmid:
**pCMV3-SP-N-His** (suitable for secretary and membrane protein expression)

### Physical Map

![Physical Map Diagram]

### Description

<table>
<thead>
<tr>
<th>Vector Name</th>
<th>pCMV3-SP-N-His</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vector Size</td>
<td>6149bp</td>
</tr>
<tr>
<td>Vector Type</td>
<td>Mammalian Expression Vector</td>
</tr>
<tr>
<td>Expression Method</td>
<td>Constitutive, Stable / Transient</td>
</tr>
<tr>
<td>Promoter</td>
<td>CMV</td>
</tr>
<tr>
<td>Antibiotic Resistance</td>
<td>Kanamycin</td>
</tr>
<tr>
<td>Selection In Mammalian Cells</td>
<td>Hygromycin</td>
</tr>
<tr>
<td>Protein Tag</td>
<td>His</td>
</tr>
</tbody>
</table>
| Sequencing Primer | Forward: T7(TAATACGACTCACTATAGGG)  
                         Reverse: BGH(TAGAAGGCACAGTCGAGG) |

### 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

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

```
1415  GGTGTCACCTCCTCAGGCATGTTAAATCTTTTATATACGACTGACCTATAGGG
       GCCGCCCAC

1475  Hind III   Kpn I
       AAG CTT  GGT ACC
       ATGCCACTGTGCTCTTGGCGCTGAAAGCTGCTGCT

1535  10Kb
       CAC CATCAC CAT CAT CAT CAT CAT CAT CAT
       GGT GGA GGC GGT ACG GCT

1583  Nhe I     SamHI
       GCT AGG      GGA TCC
       GTT AAC    CTT AAG
       ACC GGT

1620  Not I     Apg I
       CTC GAG      TCT AGA
       GGC GGC GGC
       GAATT C GGG CCC
       GTTT AAAAC

1670  BGH Primer binding site
       CCGTGTCTAGCCCTGACTGTGCTCTCTTA
       GTTGCAGCAGCATGTTGGTG
```

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