**Title:** Lentiviral vector delivery of short hairpin RNA to NgR1 promotes nerve regeneration and locomotor recovery in injured rat spinal cord.

**Author Names:** Xiaoyang Zhao, Zhiming Peng, Lingli Long, Ningning Chen, Haichong Zheng, David YB Deng*, Yong Wan*

## SUPPLEMENTAL INFORMATION

### 1. Blast Results

**(1) Blast of control RNAi**

Rattus norvegicus vav guanine nucleotide exchange factor 3 (Vav3), transcript variant X1, mRNA
Sequence ID: XM_017590775.1Length: 5116Number of Matches: 1
Related Information
Gene-associated gene details
Range 1: 638 to 651GenBankGraphicsNext MatchPrevious Match
Alignment statistics for match #1

| Score | Expect | Identities | Gaps | Strand |
|---|---|---|---|---|
| 28.2 bits(14) | 3.3 | 14/14(100%) | 0/14(0%) | Plus/Minus |

```
Query  4    TCCGAACGTGTCAC  17
            ||||||||||||||
Sbjct  651  TCCGAACGTGTCAC  638
```

**(2) Blast of NgR1 RNAi**

Rattus norvegicus NOGO-66 receptor (NgR) mRNA, complete cds
Sequence ID: AF462390.1Length: 1422Number of Matches: 1
Related Information
UniGene-clustered expressed sequence tags
Map Viewer-aligned genomic context
Range 1: 195 to 213GenBankGraphicsNext MatchPrevious Match
Alignment statistics for match #1

| Score | Expect | Identities | Gaps | Strand |
|---|---|---|---|---|
| 38.2 bits(19) | 1.1 | 19/19(100%) | 0/19(0%) | Plus/Plus |

```
Query  1    CGGCAACCGAATCTCTTAC  19
            ||||||||||||||||||||
Sbjct  195  CGGCAACCGAATCTCTTAC  213
```

**2. Lentiviral vector structure and detection NgR1 and NF200 in the injured area**

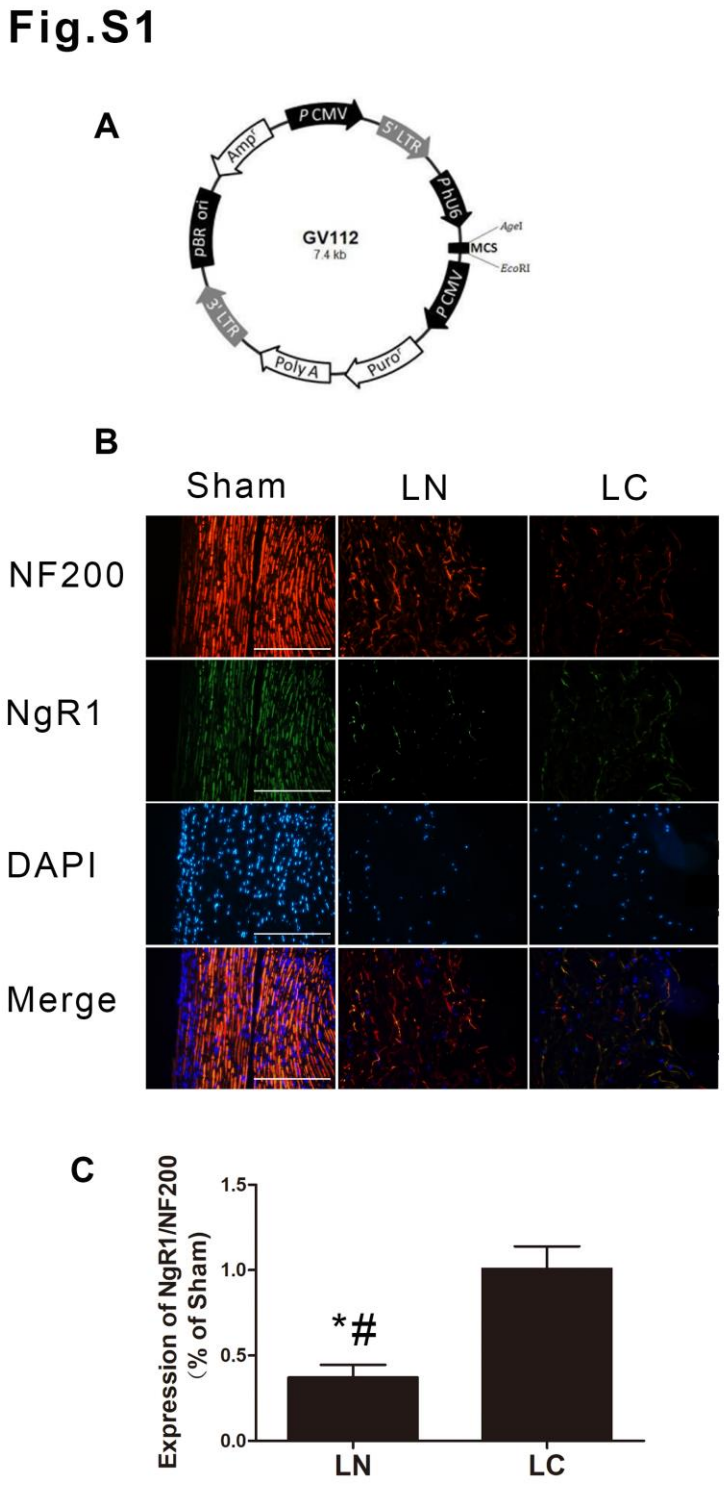


**Figure S1:** Lentiviral vector structure and detection NgR1 and NF200 in the injured area. A: Structure of pGV112.B：Immunofluorescent showing the NgR1 and neural fiber maker NF200 in lesion site at each group. C: Bars represented the ratios of

NgR1/NF200 expression. Note that NF200+ axons in the spinal cord normally express NgR1 and NgR1 expression was decreased in NF200 positive cell after treated LV-NgR1 shRNA. Bar=100μm. *#P<0.01