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**Supplementary Data**

**Genomic similarity and antibody-dependent enhancement of immune serum potentially affect the protective efficacy of commercial MLV vaccines against NADC30-like PRRSV**

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**Table S1** Primers used for complete genome sequencing of SX-YL1806

|  |  |  |
| --- | --- | --- |
| Primer | Sequence | Product size (bp) |
| SX-YL1806-PD1-F | ATGACGTATAGGTGTTGGCTCT | 1351 |
| SX-YL1806-PD1-R | TCTCTTCCCAGCACCATACCAC |
| SX-YL1806-PD2-F | TGAGGACCTCCTCAGAATAAG | 1166 |
| SX-YL1806-PD2-R | CCAAACTGCCACACCTGGGCC |
| SX-YL1806-PD3-F | GAATTCCAGCCTCGAAAAGCGGA | 1435 |
| SX-YL1806-PD3-R | CTGGGTCGGGTACAGGCTT |
| SX-YL1806-PD4-F | CATCGTCTCCCATCTCCCTGT | 1343 |
| SX-YL1806-PD4-R | AGAGGTTCCCAAACATAGCT |
| SX-YL1806-PD5-F | AGGTTGTGCATCTCCCAGCA | 1362 |
| SX-YL1806-PD5-R | CCTATTGAGAGCTGCTGTTAG |
| SX-YL1806-PD6-F | AATGATGGGACATGCCTGGAC | 1434 |
| SX-YL1806-PD6-R | AAACACTGCTCCTTAGTCAGGCCC |
| SX-YL1806-PD7-F | TCAGTGTGGGCATATCACCAT | 1265 |
| SX-YL1806-PD7-R | GTACCGAGTATGGTCCTGGTT |
| SX-YL1806-PD8-F | CGTCCCTGAGATCGACGTT | 1380 |
| SX-YL1806-PD8-R | CTGGCATAATCACCATCTGG |
| SX-YL1806-PD9-F | GACCCAGGCCGATATCAGACCC | 1382 |
| SX-YL1806-PD9-R | CAATCTACCTCAATTCGGCCGGT |
| SX-YL1806-PD10-F | TCGGTGCCGGCTACATGGTGG | 1293 |
| SX-YL1806-PD10-R | GGTGCGATACATACGTCGCGACA |
| SX-YL1806-PD11-F | CAGAAGATCCTATGAGGCTT | 1373 |
| SX-YL1806-PD11-R | CTTGACATGTTGGACATAGCT |
| SX-YL1806-PD12-F | CTCTGACCTTCTCATGCTCTCT | 1559 |
| SX-YL1806-PD12-R | GACGTCATCTTCAGTCGCTA |
| SX-YL1806-PD13-F | AGAAGGGGAATGGCCAGCCA | 489 |
| SX-YL1806-PD13-R | AATTTCGGCCGCATGGTTCTCG |
| 5′UTR-GSP-1 | GATTACGCCAAGCTTAGGCTTG  GGTTTCTGCGGAAGCGGCAGG | 715 |
| 3′UTR-GSP-1 | GATTACGCCAAGCTTCCACTACGGT  CAACGGCACACTGGTGCCCG | 621 |

**Table S2** Reference strains used for the analysis of SX-YL1806.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Strain | Accession No. | Type | Country |
| 1 | SD-YL1712 | MT708500 | 2 | China |
| 2 | TJnh1501 | KX510269 | 2 | China |
| 3 | TJbd14-1 | KP742986 | 2 | China |
| 4 | JXA1 | EF112445 | 2 | China |
| 5 | JXA1-P120 | KC422727 | 2 | China |
| 6 | WuH3 | HM853673 | 2 | China |
| 7 | MY-376 | KJ609517 | 2 | China |
| 8 | GD | EU825724 | 2 | China |
| 9 | GD-P100 | GU143913 | 2 | China |
| 10 | HuN4 | EF635006 | 2 | China |
| 11 | TJ | EU860248 | 2 | China |
| 12 | JXwn06 | EF641008 | 2 | China |
| 13 | GD-HD | KP793736 | 2 | China |
| 14 | CH1a | AY032626 | 2 | China |
| 15 | CH1R | EU807840 | 2 | China |
| 16 | HNjz15 | KT945017 | 2 | China |
| 17 | CHsx1401 | KP861625 | 2 | China |
| 18 | HENAN-XINX | KF611905 | 2 | China |
| 19 | HENAN-HEB | KJ143621 | 2 | China |
| 20 | JL580 | KR706343 | 2 | China |
| 21 | FJZ03 | KP860909 | 2 | China |
| 22 | FJ1402 | KX169191 | 2 | China |
| 23 | FJNP2017 | MH046842 | 2 | China |
| 24 | HNyc15 | KT945018 | 2 | China |
| 25 | GDZS2016 | MH046843 | 2 | China |
| 26 | GM2 | JN662424 | 2 | China |
| 27 | QYYZ | JQ308798 | 2 | China |
| 28 | JS2021NADC34 | MZ820388 | 2 | China |
| 29 | LNWK130 | MG913987 | 2 | China |
| 30 | HB-1(sh)/2002 | AY150312 | 2 | China |
| 31 | VR-2332 | AY150564 | 2 | USA |
| 32 | RespPRRS MLV | AF066183 | 2 | USA |
| 33 | MN184C | EF488739 | 2 | USA |
| 34 | NADC30 | JN654459 | 2 | USA |
| 35 | Lelystad | M96262 | 1 | Europe |
| 36 | EuroPRRSV | AY366525 | 1 | Europe |

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**Fig. S1** Promoting effect of immunized serum on HP-PRRSV SD-YL1712 or NADC30-like PRRSV SX-YL1806 replication in vitro by immunofluorescence assay. **A** The porcine alveolar macrophages (PAMs) were infected with the PRRSV-serum complex for 24 h (HP-PRRSV SD-YL1712), and the MLV-immunized serums were collected from group MLV-SD at 42 dpv and diluted by 1:50. **B** The PAMs were infected with the PRRSV-serum complex or PRRSV-serum-Protein A complex for 24 h (NADC30-like PRRSV SX-YL1806), and the MLV-immunized serums were collected from group MLV-SX at 42 dpv and diluted by 1:50. The 6D10 was used as the corresponding antibody. Unimmunized pig serums [PRRSV (-)] and PEDV-positive pig [PEDV (+)] serums served as controls. Scale bar = 100μm.