Supporting information

Safety, immunogenicity and effectiveness of defective viral particles arising in mast cells against influenza in mice

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Table S1. The primer sequences

| Target name | Primers                                        |
|-------------|-----------------------------------------------|
| Influenza A virus | HA 5'- CGCAGTATTAGAAGGAAGCAGAAGC -3' 5'- TCCATAAGGATAGACCCAGCTACCA -3' |
|              | Mouse                                          |
|              | IFN-β 5'- AGATGTCTCAAATGCTTCTC -3' 5'- AGATTACTACAGTCCCAG -3' |
|              | IFN-γ 5'- GACTGTGATTGCCTGAGGGTG -3' 5'- GGGCCGGAGTGTAGACATCT -3' |
|              | ISG56 5'- GACAAAGCAATCCACCTACCTAC -3' 5'- GTCTTTAGCCACTTTCTCCA -3' |
|              | TNF 5'- TACCTGGAGCCTCAATGTC -3' 5'- GTGAGGAAGGCTGTGCATTG -3' |
|              | IL-6 5'- ACAGAAGGATGGCTAAAGGA -3' 5'- CGCCTAGTTTGCCGAGTA -3' |
|              | MCP-1 5'- GCTTCTGGGGCTGCTGTCTTC -3' 5'- AGCTCTCCAGCCAACATCTATT -3' |
|              | β-actin 5'- GAGACCTTTCAAACACCCAGCC -3' 5'- ATGTCACGCAGATTTCCC -3' |

Table S2. I/T ratios in HD virus isolated from HMC-1 cells and A549 cells following H1N1 infection.

| Time of sample collection | Infectivity titer (I): TCID50/25μl | Total titer (T): HA/25 μl | I/T       |
|---------------------------|-----------------------------------|---------------------------|-----------|
| HD virus (HMC-1)          | 30h                               | 6264.84                   | 16        | 391.5525 |
| HD virus (A549)           | 18h                               | 6264.84                   | 16        | 391.5525 |
| LD virus                  | /                                 | 9929102.93                | 256       | 38785.55832 |
Table S3. The safety of mice treated with different doses of H1N1 LD virus and their protective efficacy on mice to fight against IAV. Mice were firstly treated with different doses of H1N1 LD virus and re-challenged with 120TCID50/mouse H1N1 LD virus at 21 days. The survival rates of infected mice were recorded.

| TCID50/mouse | Days post-challenge | Days post-rechallenge (120TCID50/mouse) |
|--------------|---------------------|----------------------------------------|
|              | 8 9 10 11 12 13 14 | 9 10 11 12 13 14                       |
| 10           | 5/7 4/7 3/7 3/7 1/7 1/7 | / / / / / / |
| 5            | 6/7 6/7 4/7 3/7 2/7 2/7 | / / / / / / |
| 1            | 7/7 6/7 5/7 5/7 3/7 2/7 | / / / / / / |
| 0.5          | 7/7 7/7 6/7 5/7 4/7 4/7 | / / / / / / |
| 0.1          | 7/7 7/7 6/7 6/7 6/7 5/7 | / / / / / / |
| 0.05         | 7/7 7/7 7/7 7/7 7/7 7/7 | 5/7 5/7 3/7 2/7 2/7 2/7 |
| 0.01         | 7/7 7/7 7/7 7/7 7/7 7/7 | 6/7 4/7 4/7 3/7 2/7 2/7 |