Development of an epitope-blocking ELISA for detection of antibodies against Tembusu virus in

domestic birds

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Lijiao Zhang, Zhanhong Li, Huan Jin, Xueying Hu, Jingliang Su

Lijiao Zhang, Institution: .Key Laboratory of Animal Epidemiology and Zoonosis, Ministry of Agriculture, College of Veterinary Medicine, China Agricultural University, Beijing 100193, China, Email: zhang62810003@126.com Zhanhong Li, Institution: .Key Laboratory of Animal Epidemiology and Zoonosis, Ministry of

Agriculture, College of Veterinary Medicine, China Agricultural University, Beijing 100193, China,

Email: dy081lzh@163.com

Huan Jin, Institution:.Key Laboratory of Animal Epidemiology and Zoonosis, Ministry of Agriculture, College of Veterinary Medicine, China Agricultural University, Beijing 100193, China, Email: jinhuan0717@126.com

Xueying Hu, Institution: College of Veterinary Medicine, Huazhong Agricultural University, Wuhan 430070, China, Email: hxying@mail.hzau.edu.cn

Corresponding author: Jingliang Su, Institution:.Key Laboratory of Animal Epidemiology and Zoonosis, Ministry of Agriculture, College of Veterinary Medicine, China Agricultural University, Beijing 100193, China, Email: suzhang@cau.edu.cn; tel: +86-10-62732312.

Running title: Blocking ELISA for Tembusu virus antibody detection

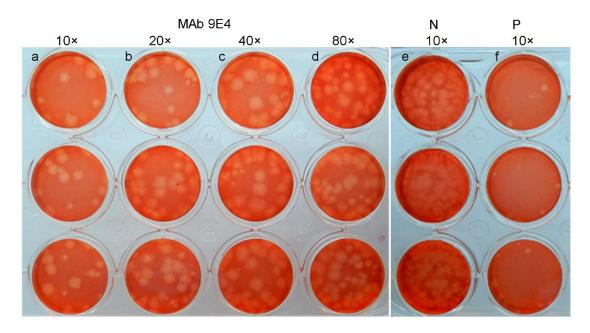


Fig. S3 Neutralizing activity of generated mAbs 9E4. (**a-d**) The mAb 9E4 was diluted 10-fold, 20-fold, 40-fold and 80-fold, respectively, to incubate with equal volume of DTMUV; (**e**) The mAb against Reovirus was diluted 10-fold to incubate with equal volume of DTMUV as negative control; (**f**) The antiserum against DTMUV was diluted 10-fold to incubate with equal volume of DTMUV as positive control

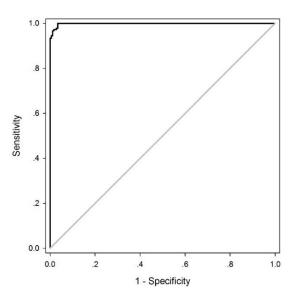


Fig. S4 ROC analysis curves for the blocking ELISA. The graph was calculated with 178 negative serum samples and 182 positive serum samples from ducks which comfirmed by PRNT. Points on the curve correspond to different cutoff values for the test. The area under the ROC curve was 0.9987

| cut-off | sensitivity | specificity |
|---------------------|-------------|-------------|
| value | | |
| 29.25% | 100% | 95.91% |
| 29.95% | 100% | 96.07% |
| 30.86% ^a | 100% | 96.63% |
| 31.31% | 99.45% | 96.63% |
| 31.61% | 98.90% | 96.63% |

Table S2 Sensitivity and specificity of the blocking ELISA with different cut off value by ROC analysis

^a The optimal cut-off value of the blocking ELISA was 30.86% according to the ROC analysis, yielding

the maximal Yonden's index (sensitivity+specificity-1)