1   **SUPPLEMENTAL:**

2   **Table 1: Attenuation of recombinant viruses, expressed as peak titer differences for each**

3   **recombinant virus relative to wild type [$\log_{10}$(recombinant/WT)], estimated by linear**

4   **regression. Differences are expressed in $\log_{10}$(IU/mL).**

Virus	Vero		C6/36	
	Difference from Wild Type	p value	Difference from Wild Type	p value
WNVΔCtrl-1	-0.287	0.032	0.252	0.701
WNVΔCtrl-2a	-0.644	< 0.001	< 0.001	1.000
WNVΔCtrl-2b	-0.187	0.149	-0.527	0.426
WNVΔCtrl-3	-0.767	< 0.001	0.385	0.559
WNVΔVax-1	-0.290	0.031	-3.186	< 0.001
WNVΔVax-2a	-0.603	< 0.001	-3.382	< 0.001
WNVΔVax-2b	-0.392	0.005	-5.897	< 0.001
WNVΔVax-3	-0.920	< 0.001	-4.969	< 0.001

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6   **Table 2: P values for two-sample *t* test of peak titers, control compared to vaccine viruses.**

Virus	Vero	C6/36
WNVΔ1	0.975	0.049
WNVΔ2a	0.604	0.001
WNVΔ2b	0.361	< 0.001
WNVΔ3	0.220	< 0.001

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Table 3: Mean differences in Vero cell plaque sizes for each recombinant virus relative to wild type [Recombinant - WT], estimated by linear regression. Differences in plaque diameters are expressed in mm, with negative values indicating smaller plaques.

Virus	Difference from Wild Type	p value
WNVΔCtrl-1	-0.310	0.093
WNVΔCtrl-2a	-1.600	< 0.001
WNVΔCtrl-2b	-1.810	< 0.001
WNVΔCtrl-3	-1.844	< 0.001
WNVΔVax-1	-0.673	< 0.001
WNVΔVax-2a	-0.979	< 0.001
WNVΔVax-2b	-0.906	< 0.001
WNVΔVax-3	-1.884	< 0.001

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Table 4: *P* values for two-sample *t* test of plaque sizes, control compared to vaccine viruses.

Virus	Vero
WNVΔ1	0.219
WNVΔ2a	0.028
WNVΔ2b	0.001
WNVΔ3	0.644

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