Dengue and Zika virus domain III-flagellin fusion and glycan-masking E antigen for prime-boost immunization

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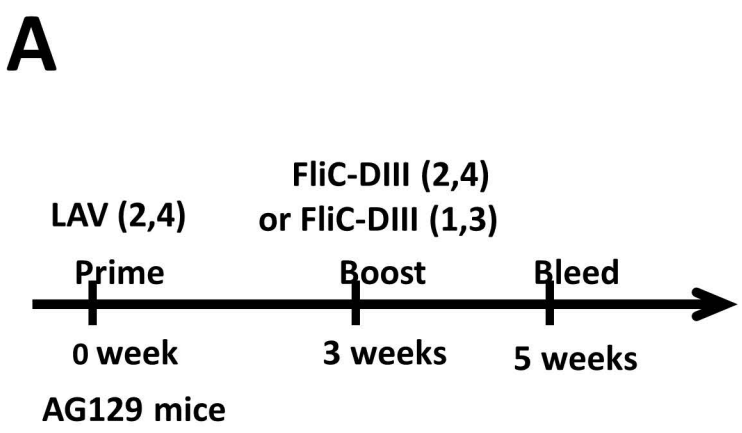
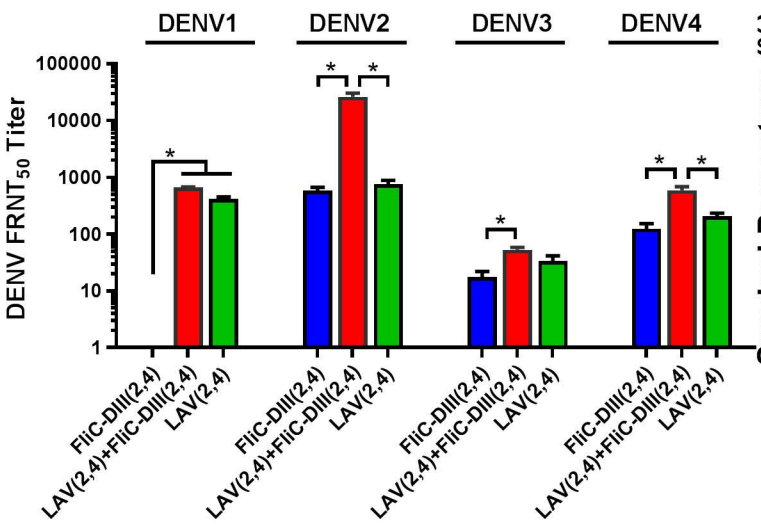
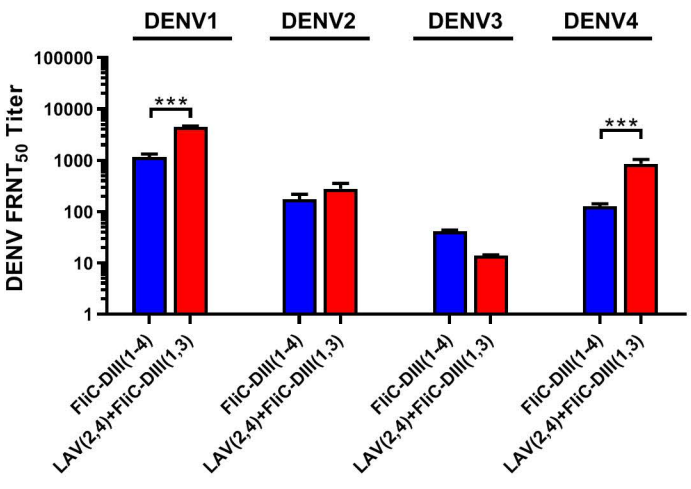
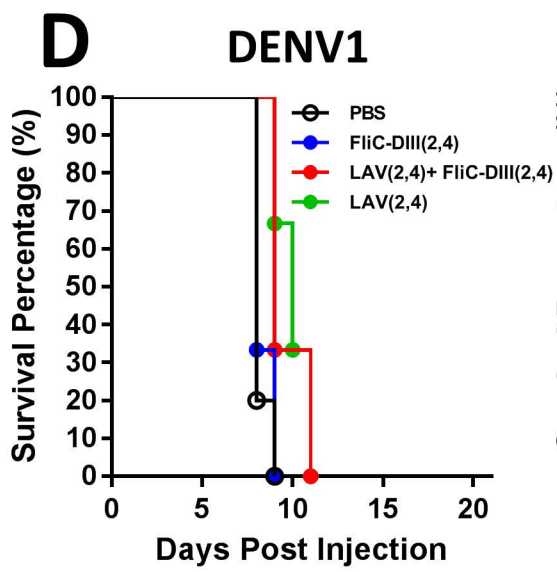
Fig. S1. (A) Prime-boost immunization regimens were conducted using the NIH live-attenuated bivalent vaccine strains (DENV2/4Δ30 and DENV4Δ30, or LAV(2,4)) and bivalent FliC-DIII boosting. Groups of AG129 mice were immunized using LAV(2,4) priming, followed by by either the homotypic bivalent FliC-DIII(2,4) or the heterotypic FliC-DIII(1,3) boosting, two doses of bivalent FliC-DIII(2,4)/FliC-DIII(1,3), or two doses of LAV(2,4). Sera were collected from the mice two weeks after the second dose immunization. **(B)** Neutralizing antibody titers against DENV1, DENV2, DENV3, or DENV4 with the homotypic bivalent FliC-DIII(2,4) boosting. (**C)** Neutralizing antibody titers against DENV1, DENV2, DENV3, or DENV4 with the heterotypic bivalent FliC-DIII(1,3) boosting. **(D)** Passive protection in newborn mice by antisera from the homotypic bivalent FliC-DIII(2,4) boosting. The survival rates of mice were recorded daily.. **(E)** Antisera passive protection in newborn mice. **(F)** A Passive protection in newborn mice by antisera from the heterotypic bivalent FliC-DIII(1,3) boosting. The survival rates of mice were recorded daily. Data were analyzed using one-way ANOVA. (*, $p < 0.05$; ***, $p < 0.001$).

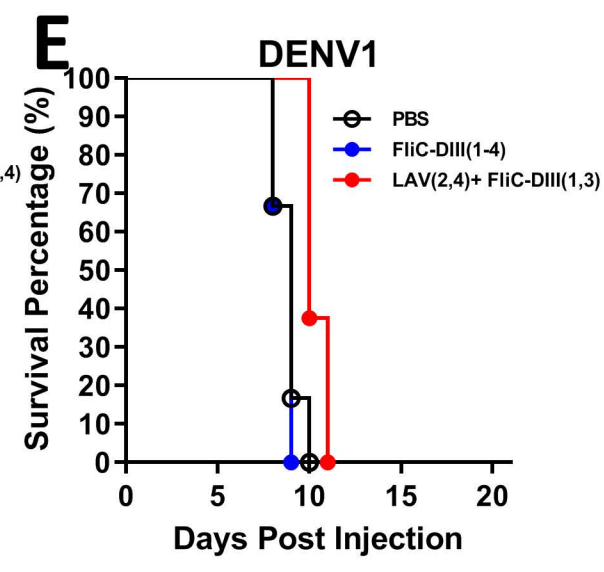
Fig. S1

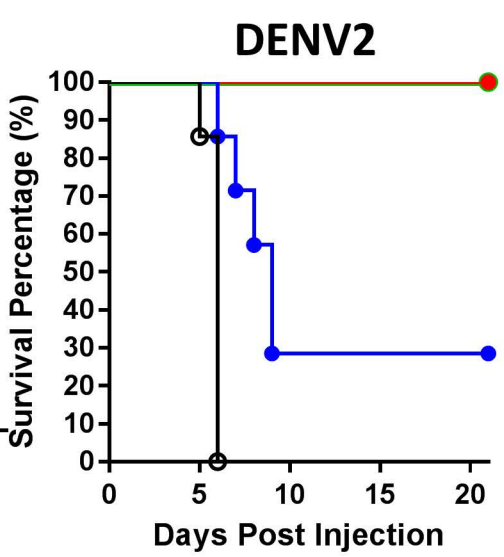

A
LAV (2,4)
FliC-DIII (2,4)
or FliC-DIII (1,3)
Prime
Boost
Bleed
0 week
3 weeks
5 weeks
AG129 mice

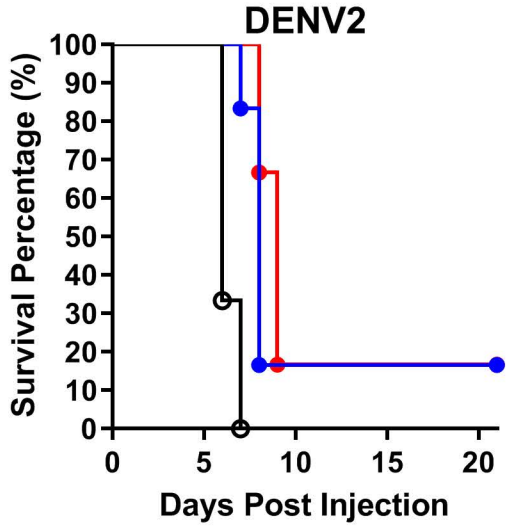

B
DENV1
DENV2
DENV3
DENV4
DENV FRNT50 Titer
100000
10000
1000
100
10
1
*
FliC-DIII(2,4)
LAV(2,4)+FliC-DIII(2,4)
LAV(2,4)

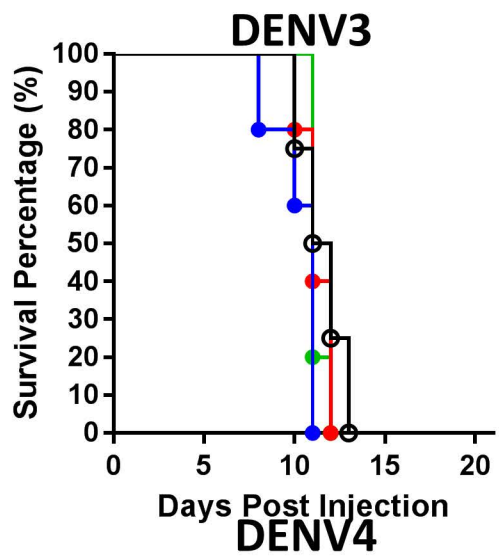

C
DENV1
DENV2
DENV3
DENV4
DENV FRNT50 Titer
100000
10000
1000
100
10
1
***
FliC-DIII(1-4)
LAV(2,4)+FliC-DIII(1,3)

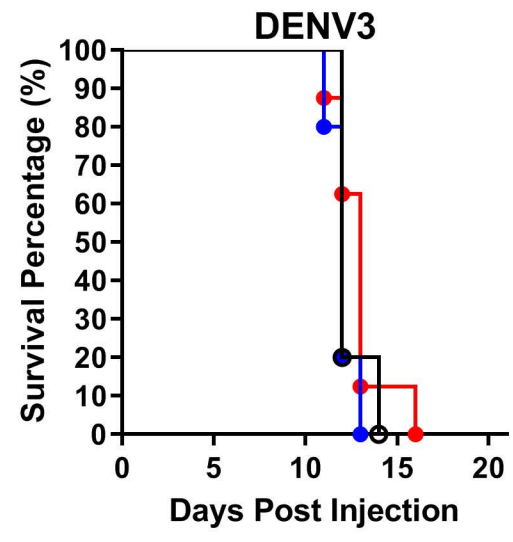

D
DENV1
Survival Percentage (%)
Days Post Injection
PBS
FliC-DIII(2,4)
LAV(2,4)+ FliC-DIII(2,4)
LAV(2,4)

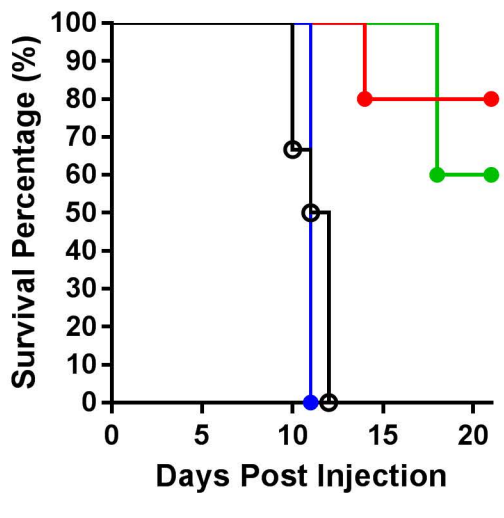

E
DENV1
Survival Percentage (%)
Days Post Injection
PBS
FliC-DIII(1-4)
LAV(2,4)+ FliC-DIII(1,3)

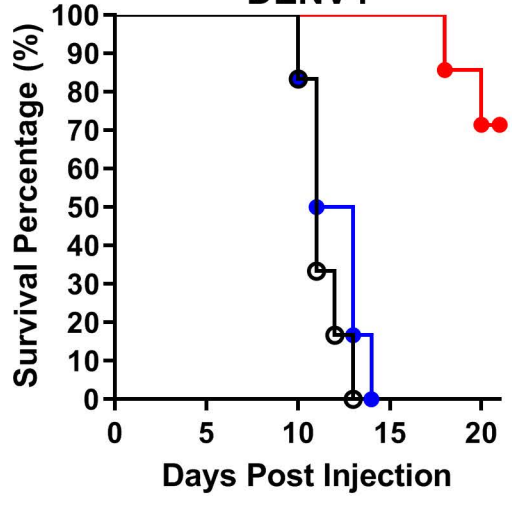

DENV2
Survival Percentage (%)
Days Post Injection


DENV2
Survival Percentage (%)
Days Post Injection


DENV3
Survival Percentage (%)
Days Post Injection


DENV3
Survival Percentage (%)
Days Post Injection


DENV4
Survival Percentage (%)
Days Post Injection


DENV4
Survival Percentage (%)
Days Post Injection