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3 **IL-1 receptor antagonist therapy mitigates placental dysfunction and perinatal injury**  
 4 **following Zika virus infection**

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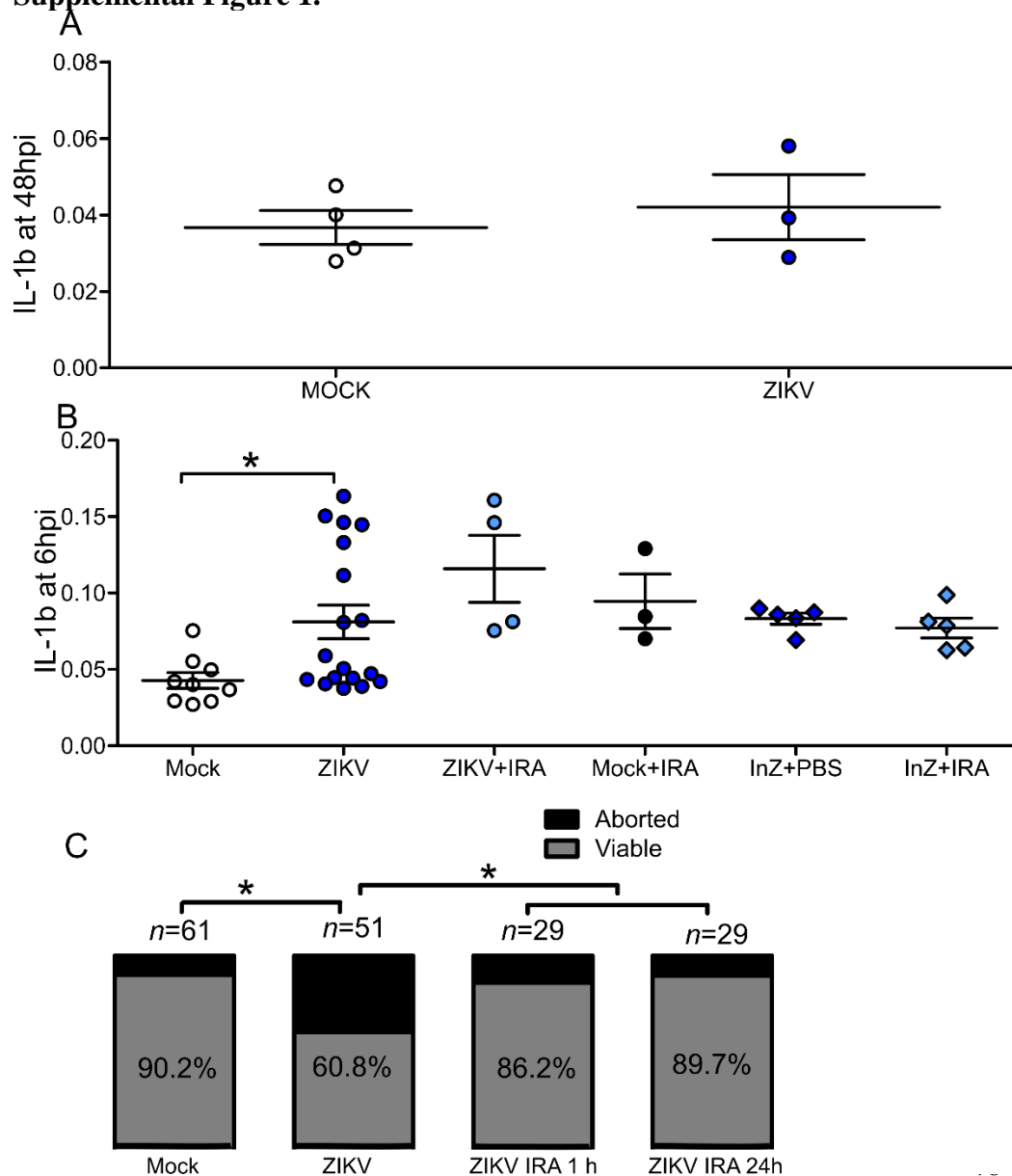
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## 45 Supplemental Figure 1.

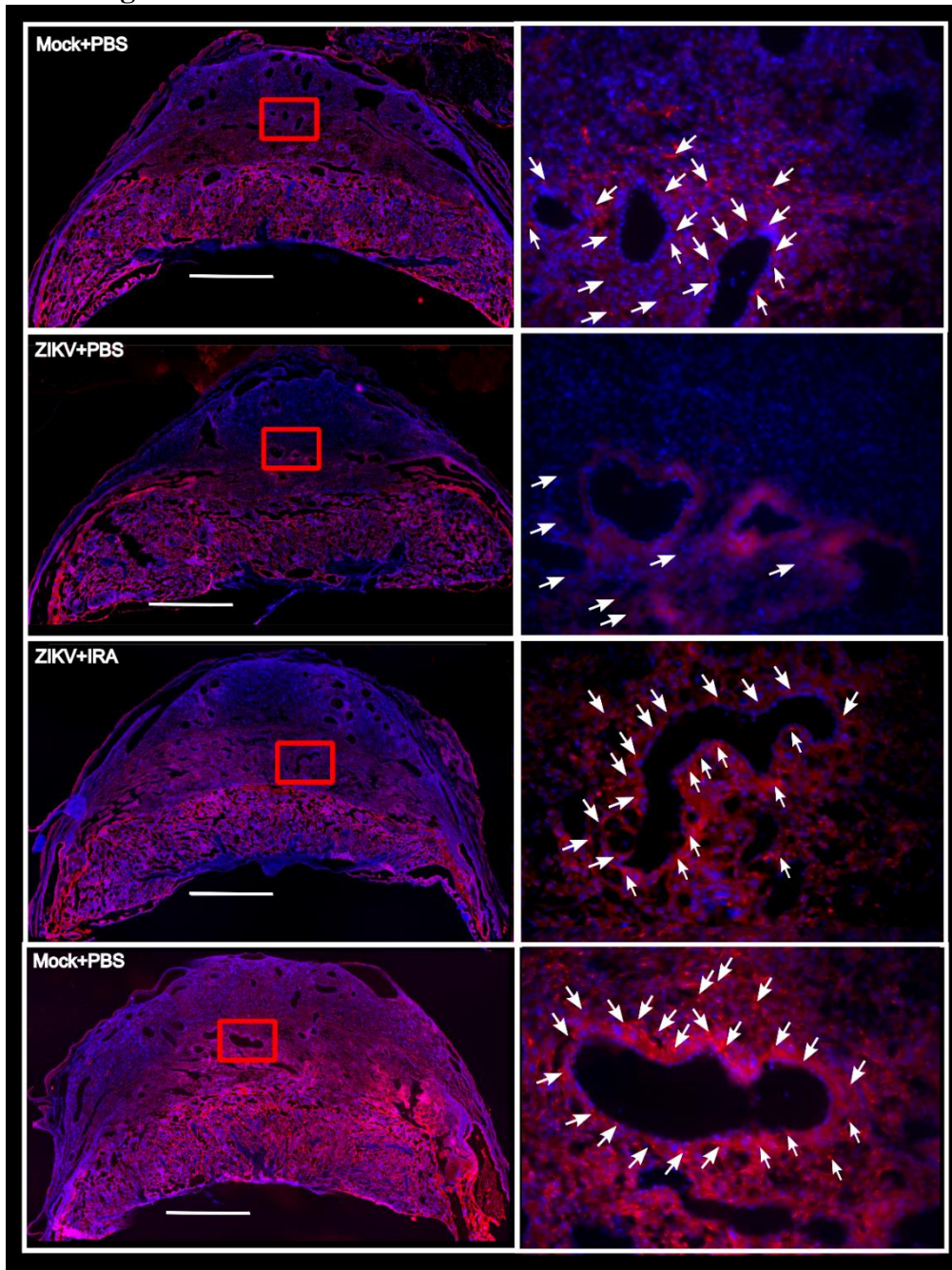


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81 **Supplemental Fig. 1. Placental IL-1 $\beta$  in response to *in utero* exposure of ZIKV.** At  
 82 embryonic day (E) 10, pregnant CD-1 mice received an intrauterine (IU) injection of  $10^6$  TCID<sub>50</sub>  
 83 units of the 2015 Brazil ZIKV, inactivated ZIKV (InZ), or vehicle (mock) **A**. The concentration  
 84 of IL-1 $\beta$  (pg/100 $\mu$ g protein) was measured in placenta homogenates 48 hours after ZIKV  
 85 inoculation. **B**. The concentration of IL-1 $\beta$  (pg/100 $\mu$ g protein) was measured in placenta  
 86 homogenates 6 hours after the inoculation with ZIKV, InZ, or vehicle (mock), with or without  
 87 IRA treatment 3 hours after the surgery. **C**. Fetal viability in mock or ZIKV infected dams  
 88 treated with IRA 1 or 24 hpi was determined as the percentage of viable fetuses within the  
 89 inoculated uterine horn. (n = the total number of fetuses from 4 to 8 dams per group). Student's *t*-  
 90 test (**A**, **B**), and Chi-square test (**C**). \*=significant difference at  $p < 0.05$ .

## 91 Supplemental Figure 2.



92 **Supplemental Fig. 2. IL-1 receptor antagonism during intrauterine ZIKV infection**  
 93 **improves trophoblast invasion.** At embryonic day (E) 10, pregnant CD-1 mice received an  
 94 intrauterine (IU) injection of  $10^6$  TCID<sub>50</sub> units of the 2015 Brazil ZIKV (n=5) or vehicle  
 95 (mock, n=4). Following ZIKV inoculation, pregnant dams were treated daily with either an  
 96 IL-1 receptor antagonist (IRA, n=4) or PBS (n=4) until tissue harvesting (E12).  
 97 Representative fluorescent immunostaining for cyokeratin (red) to label trophoblast cells  
 98 (white arrows) in the placenta. The right panel is the high magnification of the red box. Scale  
 99 bar: 1mm