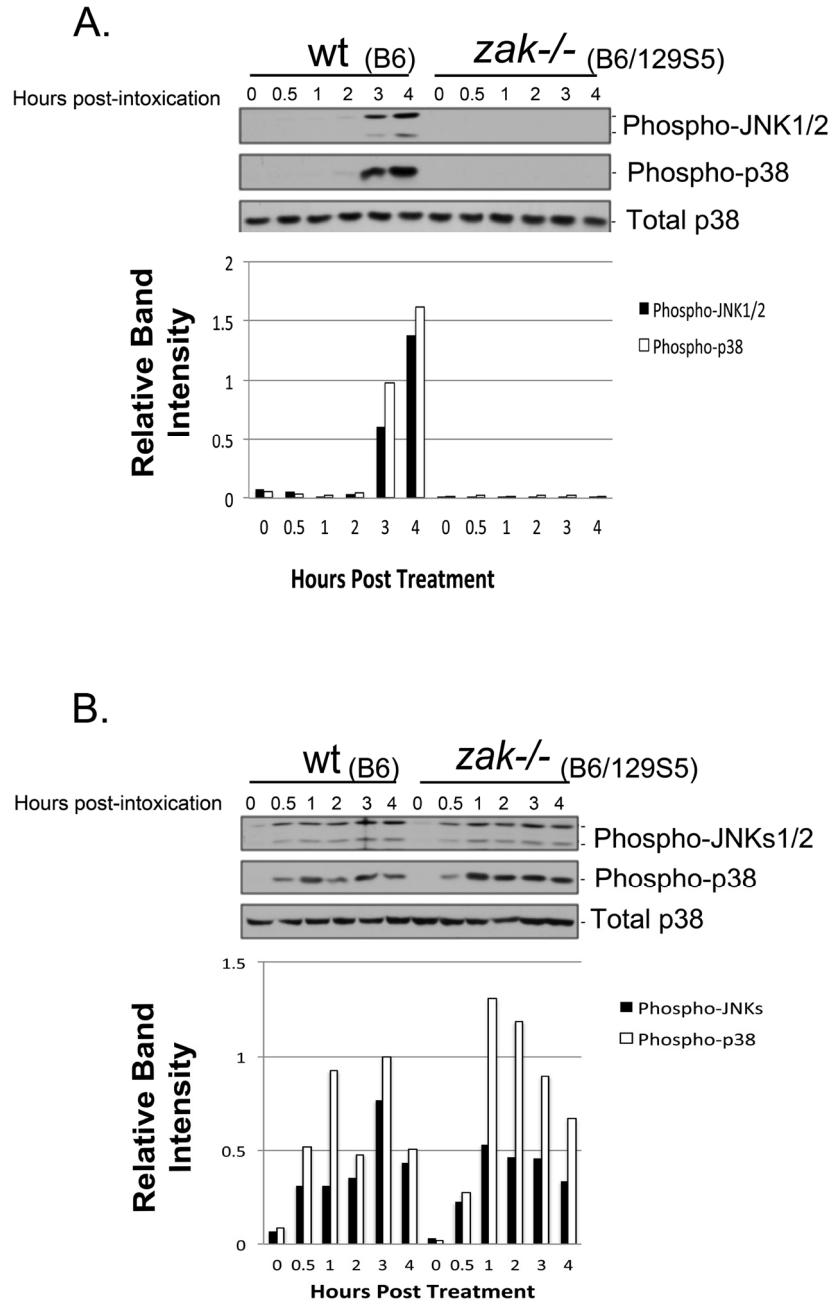
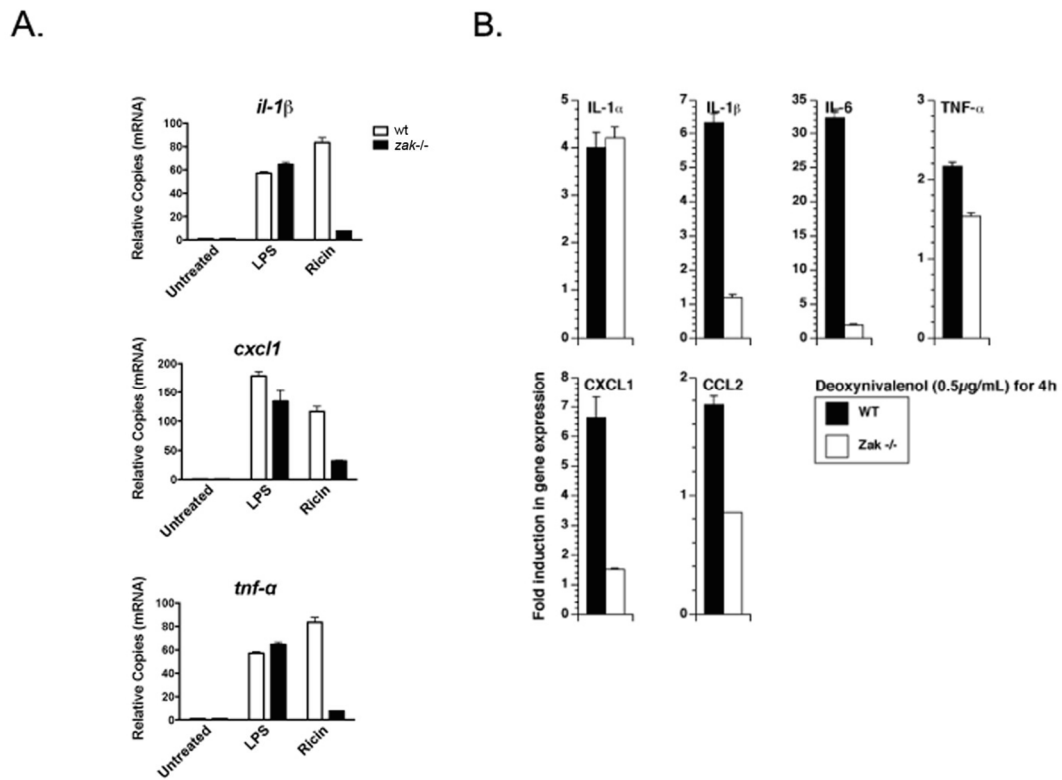


# Supplementary Materials: A Novel *Zak* Knockout Mouse with a Defective Ribotoxic Stress Response

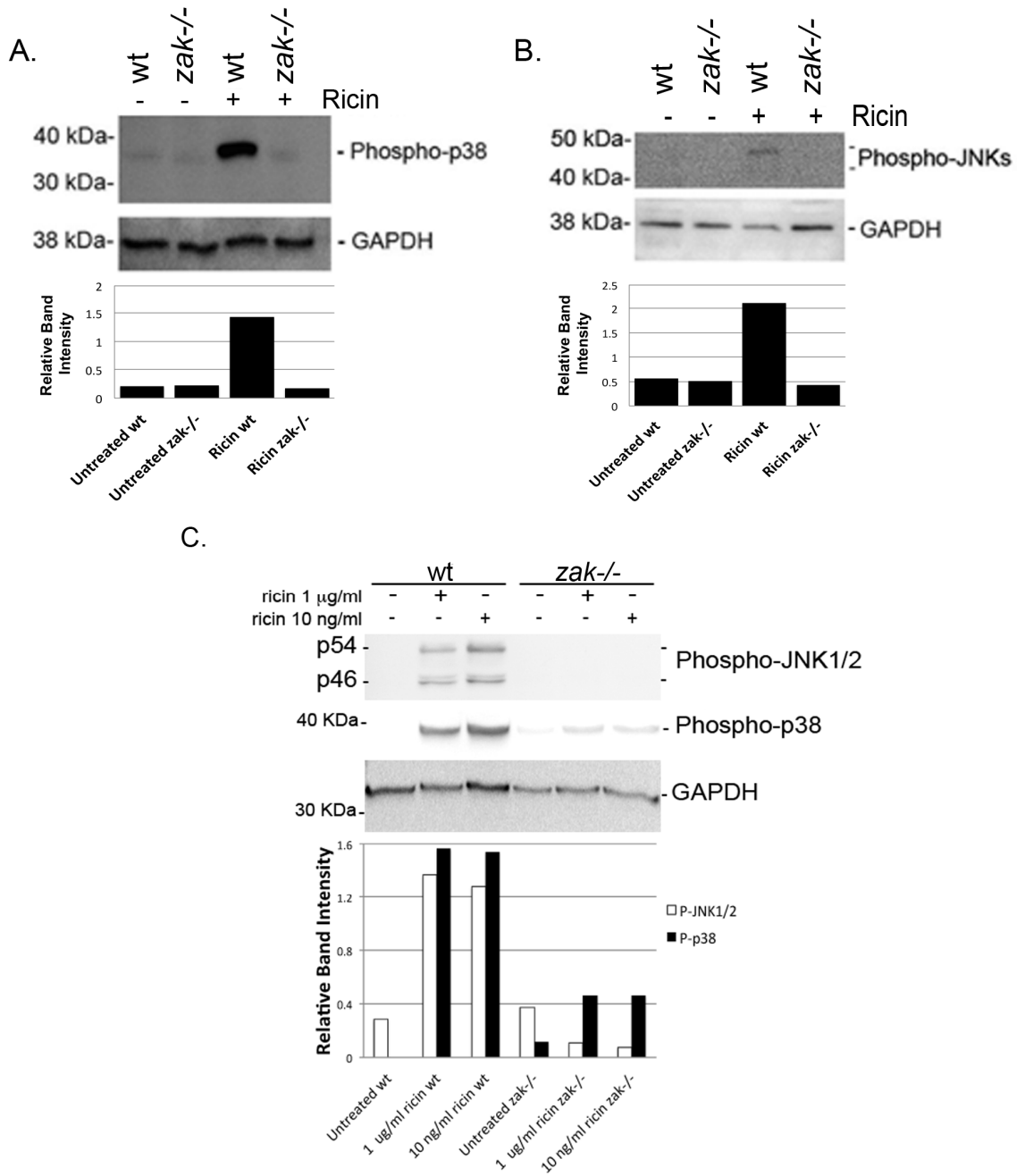
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**Figure S1.** BMDMs from 129/B6 *zak*<sup>-/-</sup> mice fail to induce the RSR but activate JNKs and p38 in response to LPS. **(A)** Western blots for phosphorylated JNK1/2 and phosphorylated p38 performed following treatment of *zak*<sup>+/+</sup> (wt) B6 or *zak*<sup>-/-</sup> 129/B6-derived BMDMs with 10 ng/mL ricin for periods of time ranging from 0.5 to 4 h. **(B)** Western blots for phosphorylated JNK1/2 and p38 performed following treatment with 50 ng/mL LPS for periods of time ranging from 0.5 to 4 h. Band intensities were measured using ImageJ 1.46r software (National Institutes of Health, Bethesda, MD, USA). Phosphorylated p38 and JNK1/2 band intensities were normalized to respective loading controls (i.e. total p38) and depicted in the graphs below the Western blots.



**Figure S2.** BMDMs from noncongenic 129/B6 *zak*<sup>-/-</sup> mice have decreased induction of proinflammatory cytokines compared to those from *zak*<sup>+/+</sup> B6 (wt) mice following intoxication with the ribotoxic stressors ricin or deoxynivalenol (DON). (A) qRT-PCR for *il-1 $\beta$* , *cxcl1*, and *tnf- $\alpha$*  following treatment with LPS or intoxication with ricin. Gene expression for all three cytokines is decreased in BMDMs from noncongenic *zak*<sup>-/-</sup> 129/B6 mice following ricin treatment but not LPS as compared to BMDMs from wt mice. (B) Following intoxication with the trichothecene toxin DON, relative expression of *il-1 $\beta$* , *il-6*, *tnf- $\alpha$* , *cxcl1*, and *ccl2* but not *il-1 $\alpha$*  was lower in BMDMs from noncongenic *zak*<sup>-/-</sup> 129/B6 mice, compared to BMDMs from wt mice.



**Figure S3.** BMDMs from congenic B6 *zak*<sup>-/-</sup> and B6 *zak*<sup>+/+</sup> (wt) mice demonstrate a perturbed or ablated RSR when treated with ricin in the presence or absence of serum. (A) Western blot for Phospho-JNK1/2. (B) Western blot for Phospho-p38. Lysates for panels A and B were made from BMDMs intoxicated with ricin in BM culture medium. (C) Western blots for Phospho-JNK1/2 and Phospho-p38. Lysates were made from BMDMs intoxicated with ricin in serum-free culture medium. GAPDH is used as a loading control in all blots.