Figure S1. Relative quantification analysis for protein levels of NLRP3, caspase-1 and IL-1β in HK-2 cells upon exposure to 0.8 mM oxalate for 24 h. NLRP3, leucine-rich repeat-containing family pyrin domain-containing 3; Ctrl, control.

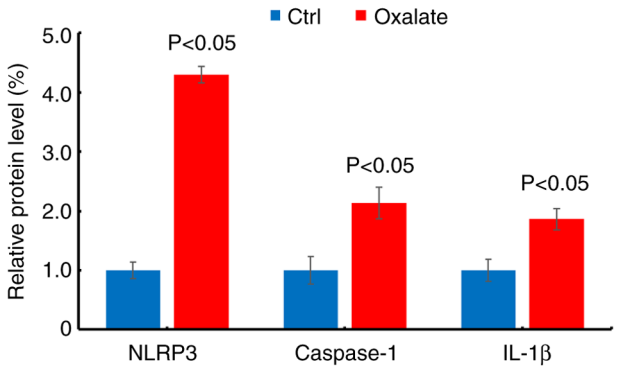

Figure S2. Relative fluorescence intensity for dichlorofluorescein diacetate in HK-2 cells treated with 0.8 mM oxalate with or without 5 mM NAC. Ctrl, control; NAC, N-acetyl cysteine.

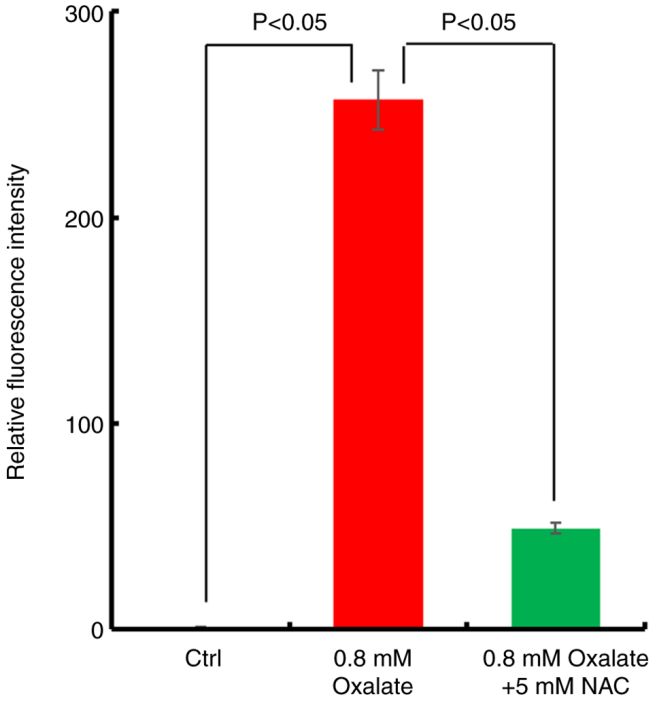

Figure S3. Relative quantification analysis for protein levels of NLRP3 in HK-2 cells treated with 0.8 mM oxalate with or without 5 mM NAC. Ctrl, control; NAC, N-acetyl cysteine.

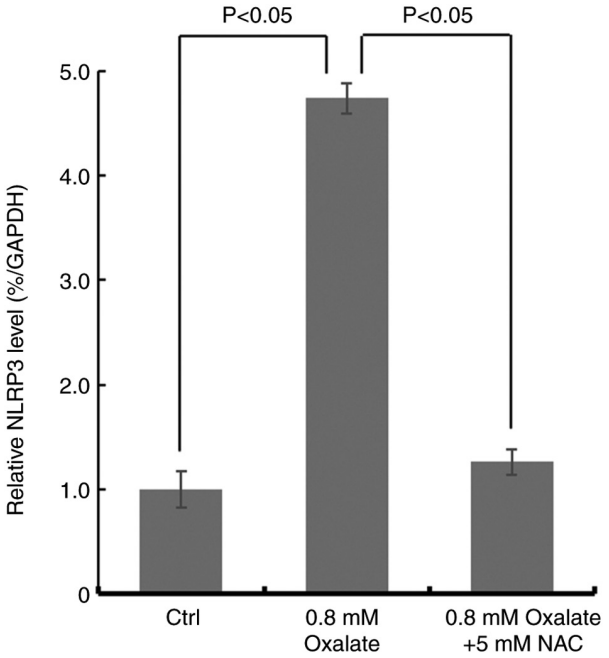

Figure S4. Relative quantification analysis for protein levels of NLRP3, caspase-1, GSDMD and GSDMD-N in HK-2 cells treated with 0.8 mM oxalate for 24 h after transfection with NLRP3-siRNA. NLRP3, leucine-rich repeat-containing family pyrin domain-containing 3; GSDMD, gasdermin D; siRNA, small interfering RNA; Ctrl, control; NC, negative control.

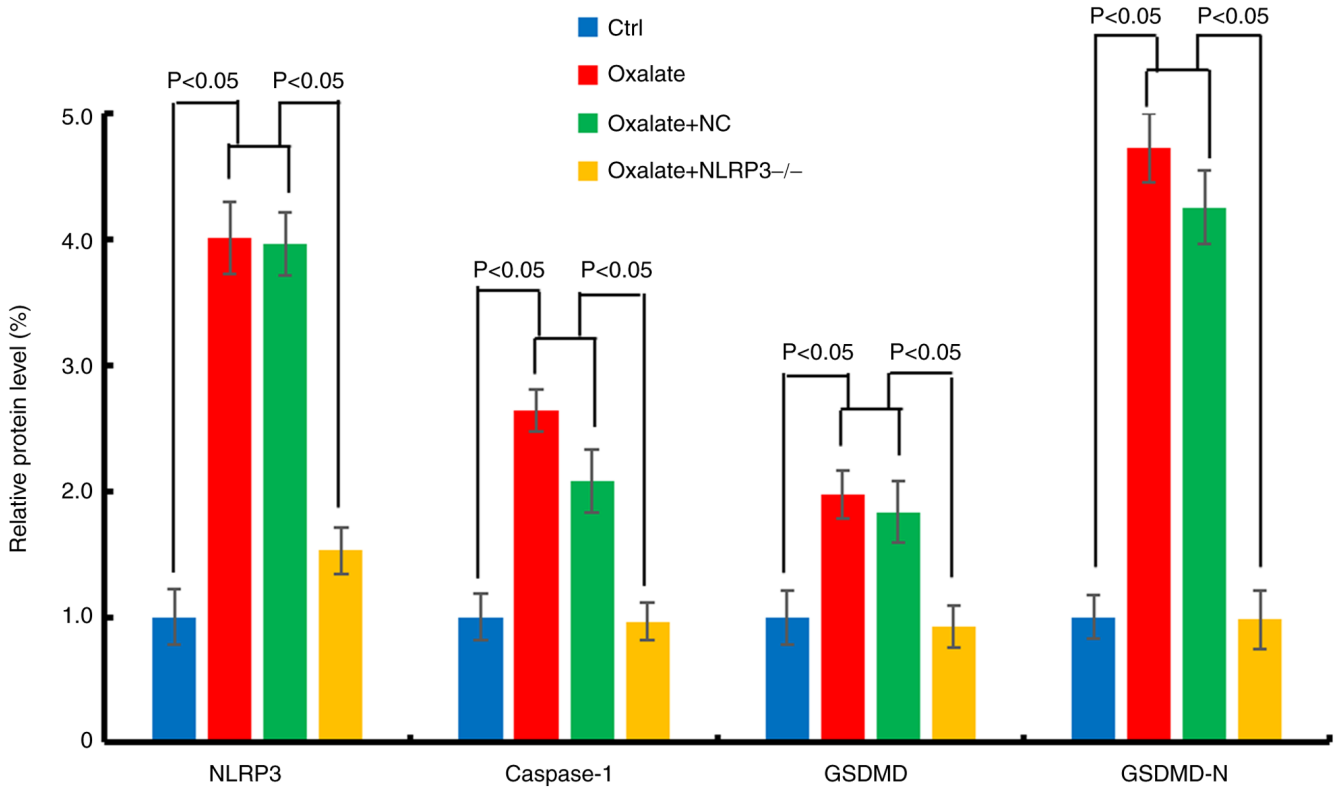

Figure S5. Relative quantification analysis for TUNEL positive cells in HK-2 cells treated with 0.8 mM oxalate for 24 h after transfection with NLRP3-siRNA. NLRP3, leucine-rich repeat-containing family pyrin domain-containing 3; siRNA, small interfering RNA; Ctrl, control; NC, negative control.

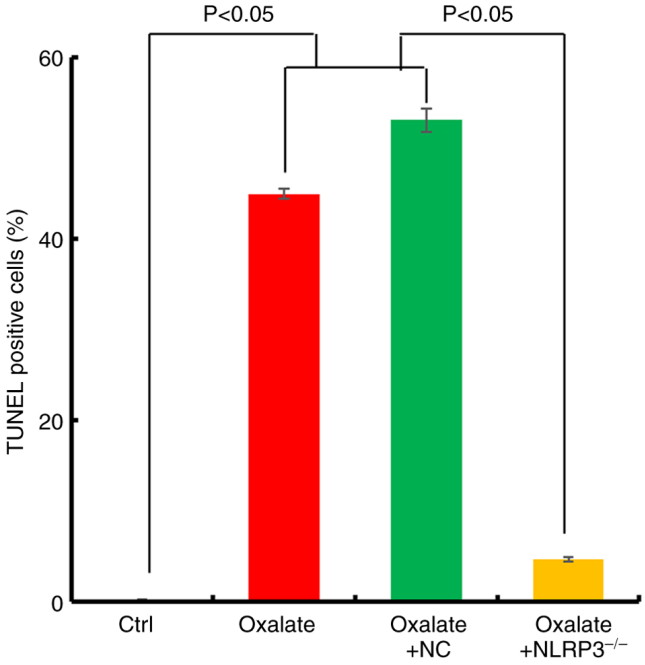

Figure S6. The ratio of live cells and dead cells with Calcein-AM/PI staining in HK-2 cells dealt with 0.8 mM oxalate for 24 h after transfection with NLRP3-siRNA. NLRP3, leucine-rich repeat-containing family pyrin domain-containing 3; siRNA, small interfering RNA; Ctrl, control; NC, negative control.

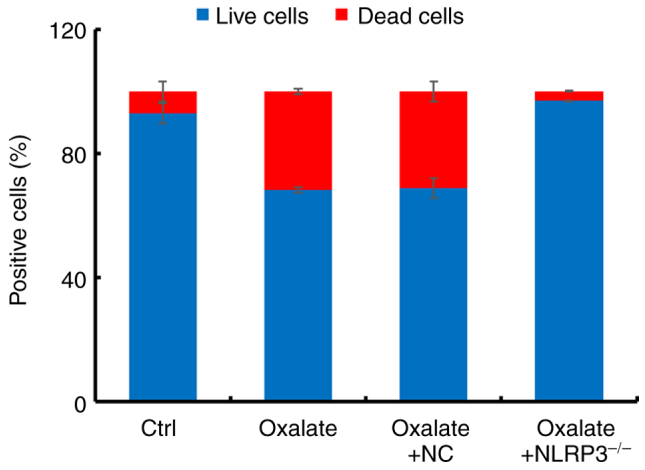

Figure S7. Relative quantification analysis for protein levels of NLRP3, caspase-1, GSDMD and GSDMD-N in HK-2 cells treated with 0.8 mM oxalate and/or NSA (5 and 15 μM) for 24 h. NLRP3, leucine-rich repeat-containing family pyrin domain-containing 3; GSDMD, gasdermin D; NSA, necrosulfonamide; Ctrl, control.

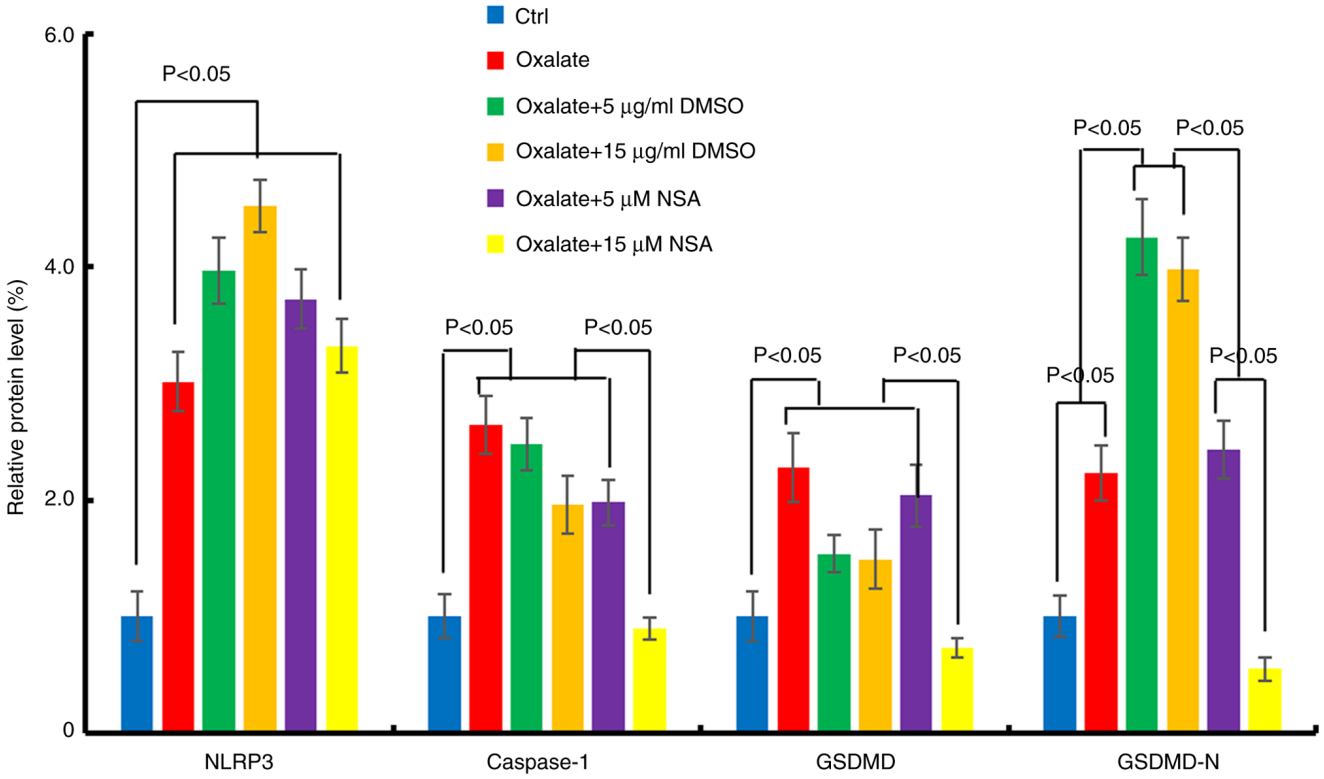

Figure S8. Relative quantification analysis for TUNEL positive cells in HK-2 cells dealt with 0.8 mM oxalate and/or NSA (5 and 15 μM) for 24 h. Ctrl, control; NSA, necrosulfonamide.

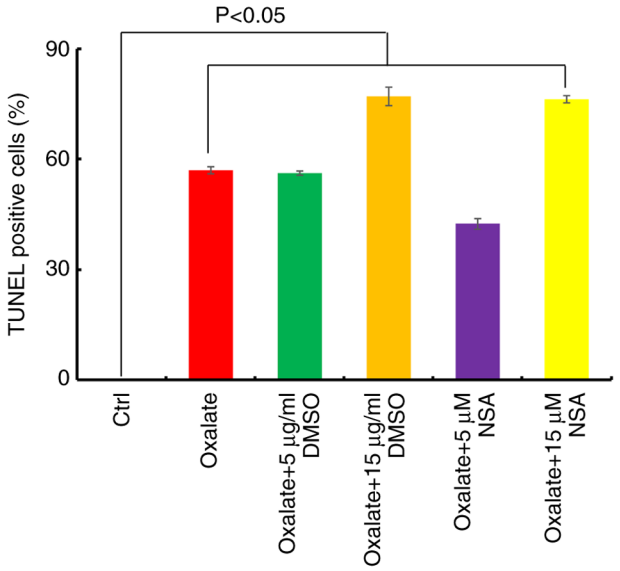

Figure S9. The ratio of live cells and dead cells with Calcein-AM/PI staining in HK-2 cells treated with 0.8 mM oxalate and/or NSA (5 and 15 μM) for 24 h. Ctrl, control; NSA, necrosulfonamide.

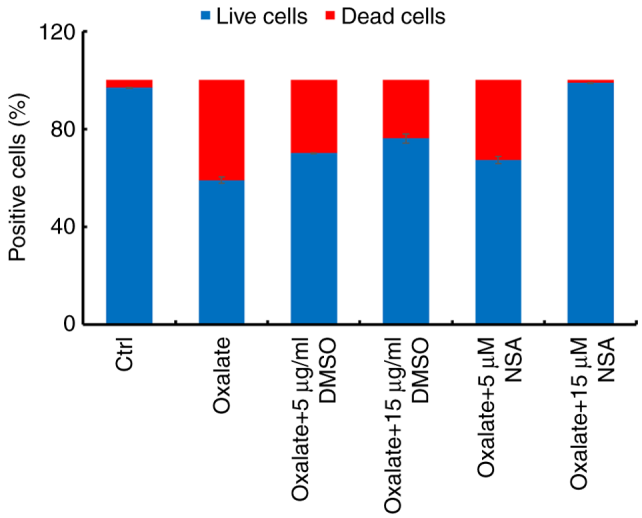

Figure S10. Relative quantification analysis for protein levels of NLRP3, caspase-1, GSDMD, GSDMD-N, IL-1β, IL-18 and OPN in oxalated crystal mice. NLRP3, leucine-rich repeat-containing family pyrin domain-containing 3; GSDMD, gasdermin D; NSA, necrosulfonamide; OPN, osteopontin; Gly, glyoxylic acid; Ctrl, control.

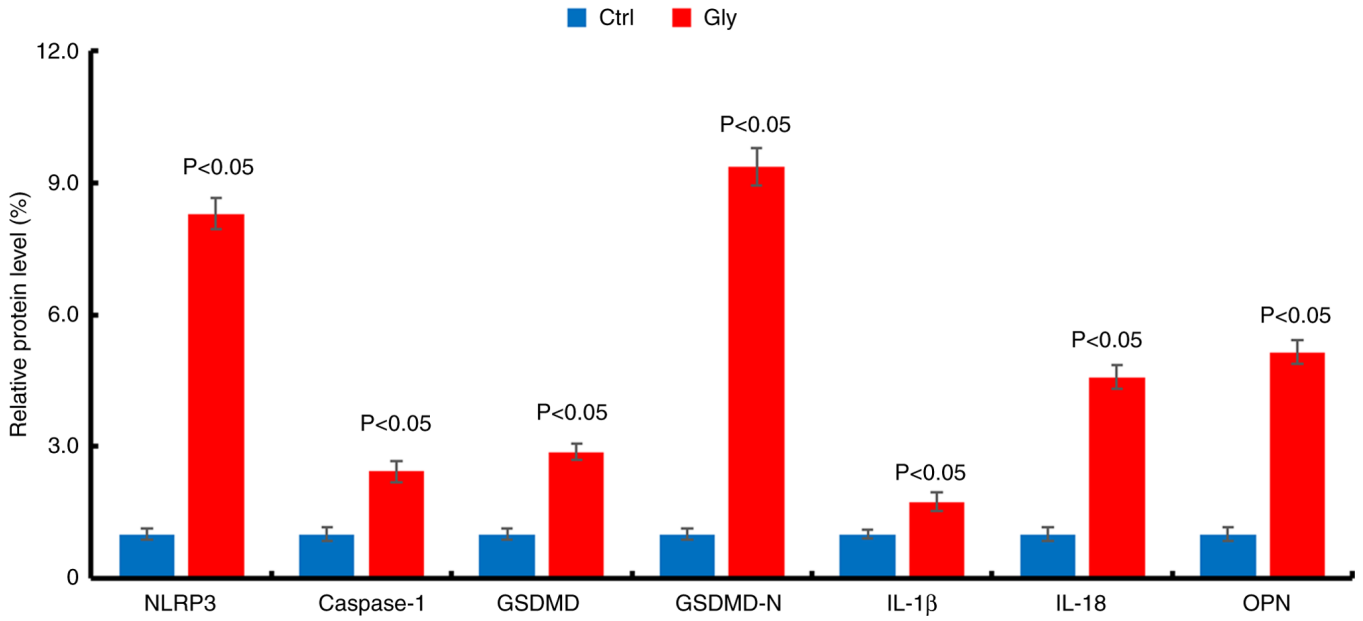

Figure S11. Relative quantification analysis for NLRP3, caspase-1, GSDMD, GSDMD-N, IL-1β, IL-18 and OPN through IHC assay in oxalated crystal mice. NLRP3, leucine-rich repeat-containing family pyrin domain-containing 3; GSDMD, gasdermin D; OPN, osteopontin; IHC, immunohistochemistry; Gly, glyoxylic acid; Ctrl, control.

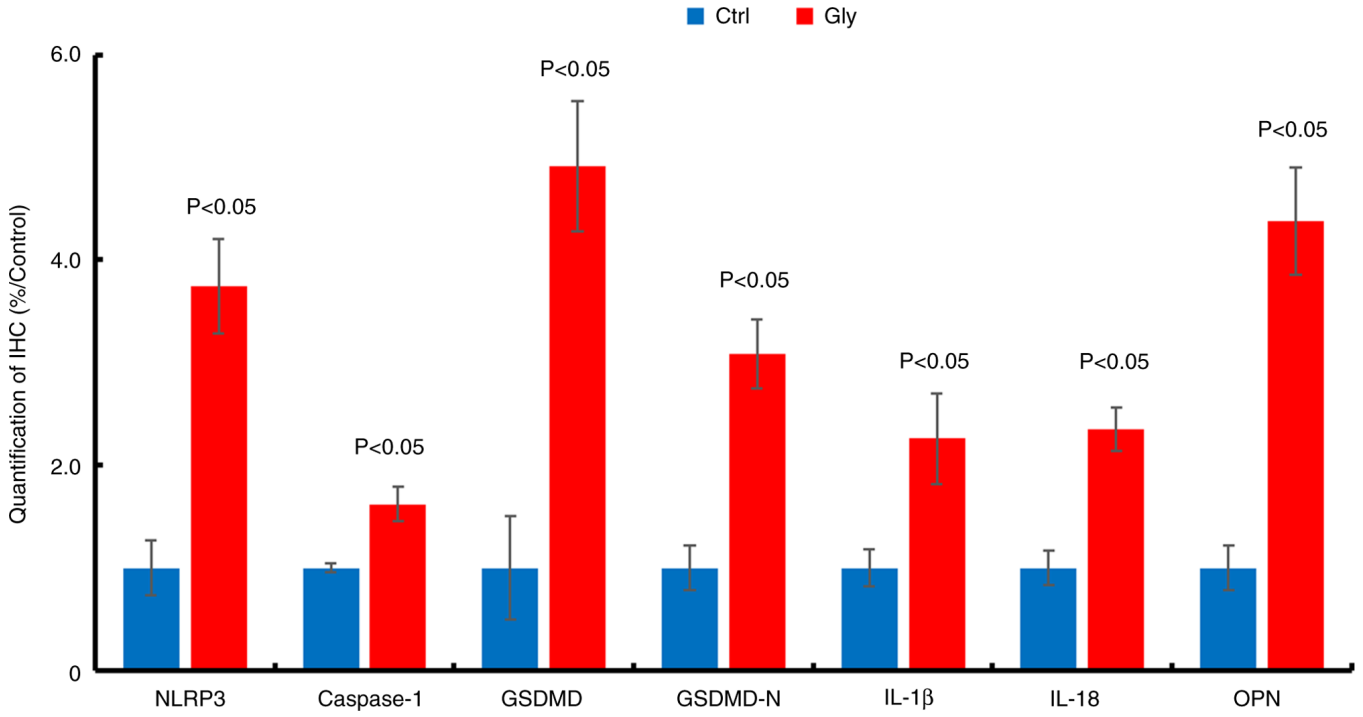

Figure S12. Relative quantification analysis for indicated proteins in NLRP3-GSDMD pathway by IHC assay in Gly-treated WT mice and Gsdmd$^{-/-}$ mice. NLRP3, leucine-rich repeat-containing family pyrin domain-containing 3; GSDMD, gasdermin D; IHC, immunohistochemistry; Gly, glyoxylic acid; WT, wild-type; OPN, osteopontin.

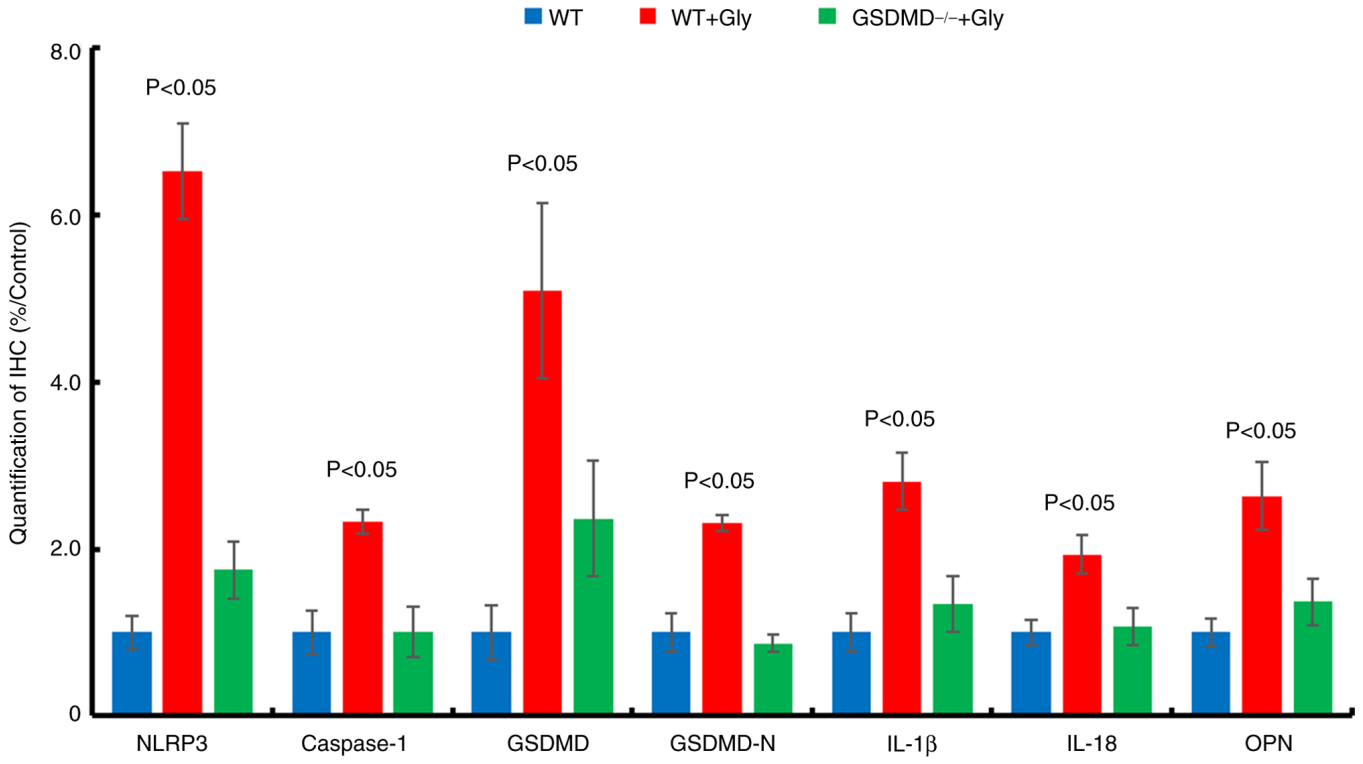

Figure S13. Relative quantification analysis for indicated proteins in NLRP3-GSDMD pathway by western blotting in Gly-treated WT mice and GSDMD$^{-/-}$ mice. NLRP3, leucine-rich repeat-containing family pyrin domain-containing 3; GSDMD, gasdermin D; Gly, glyoxylic acid; WT, wild-type; OPN, osteopontin.