Figure 5. Titanium triggers inflammasome activation. Titanium particle internalization triggers the release of Cathepsin B from lysosomes, which together activate Nalp3. Activated Nalp3 recruits ASC through PYD domain interactions. This complex triggers cleavage and recruitment of activated Caspase-1 through CARD domain interactions. This inflammasome complex then cleaves pro-IL-1β into its active, secreted form IL-1β, which can trigger downstream IL-1 associated signaling, including neutrophil recruitment, through activation of the IL-1R. This acute inflammatory response can be inhibited with IL-1Ra treatment.

Figure S1. Cytokine responses to titanium-particle stimulation. (**a**) IL-1β secretion in WT immortalized mouse macrophages incubated with titanium particles only or titanium particles following an LPS prime for 6 h. Dashed line represents LPS prime only values. (**b**) IL-6 secretion following incubation with titanium particles only or LPS only for 6 h. Secreted cytokine levels are mean ± s.e.m. P-values are shown as *** ≤ 0.0001; * < 0.05

Supplemental Figure 1