Supporting Information

Impact of Morphology on Iron Oxide Nanoparticles-Induced Inflammasome Activation in Macrophages

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Notes

The authors declare no competing financial interest.

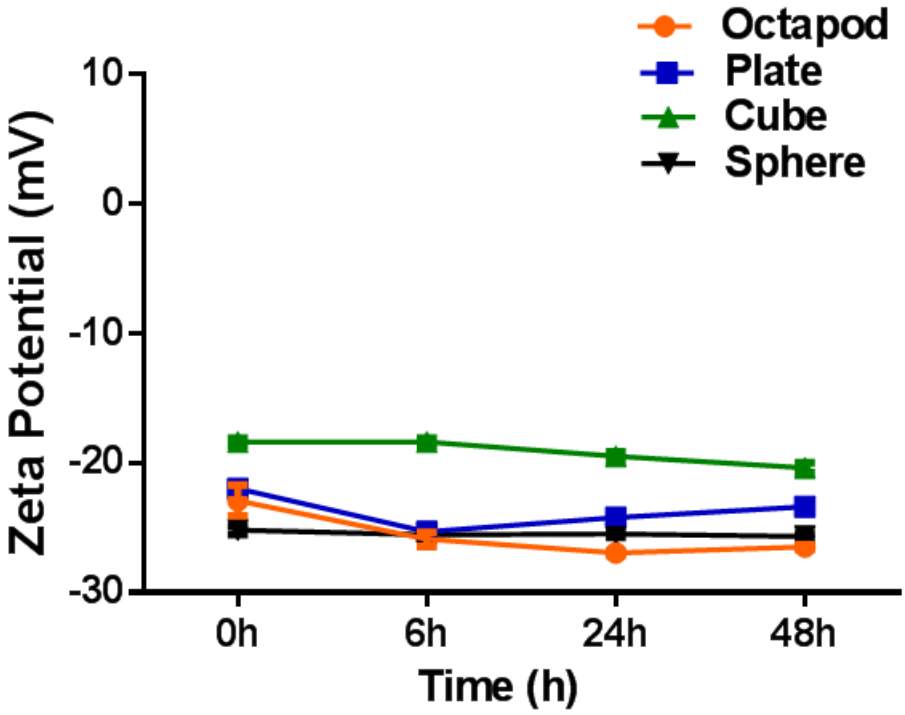

Figure S1. Zeta potential of different IONPs incubated in PBS (10 mM phosphate buffer saline, pH 7.4) after indicated time points .

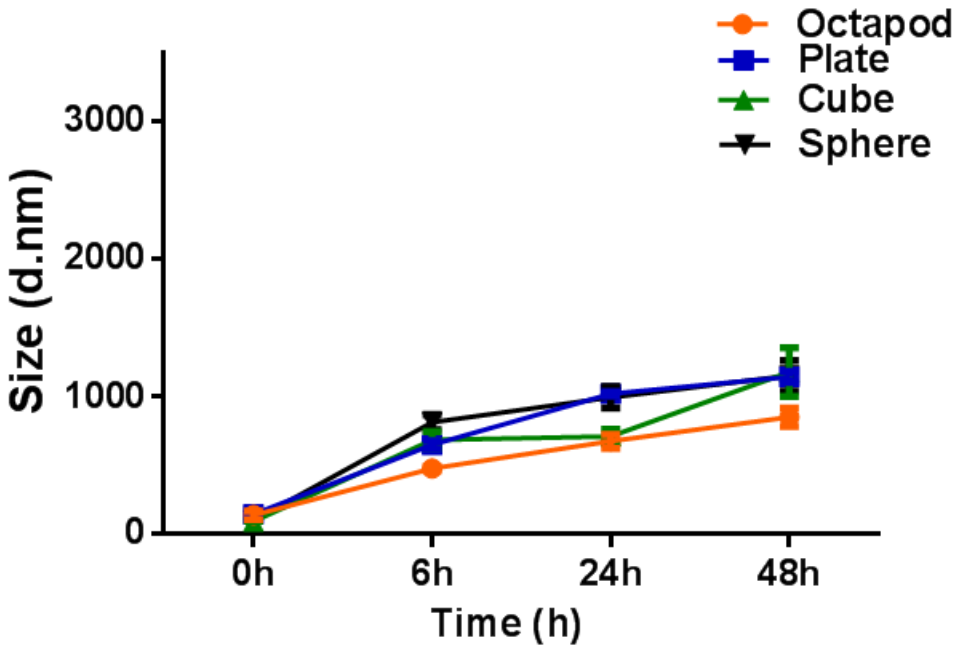

Figure S2. Size of different IONPs after incubating in PBS (10 mM phosphate buffer saline, pH 7.4) for indicated time points as measured by dynamic light scattering (DLS).

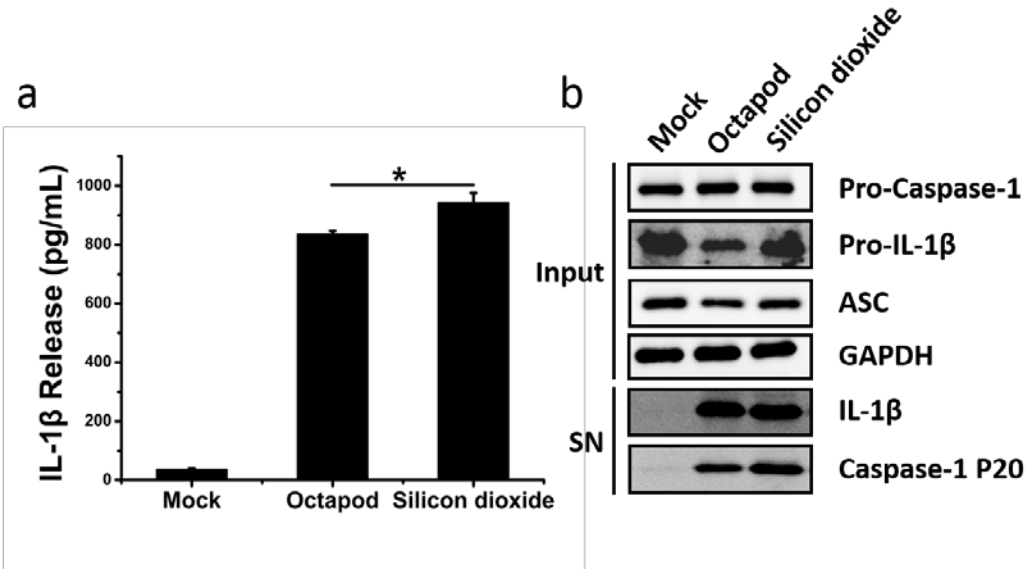

Figure S3. LPS-primed BMDMs were treated for 6 hr with octapod IONPs or silicon dioxide (100 ug/ml). a. Culture supernatants were analyzed by ELISA for IL-1β release. Mean ± SEM, n=3. * $p<0.05$. b. Culture supernatants (SN) and cell lysate (Input) were analyzed by Western blot.

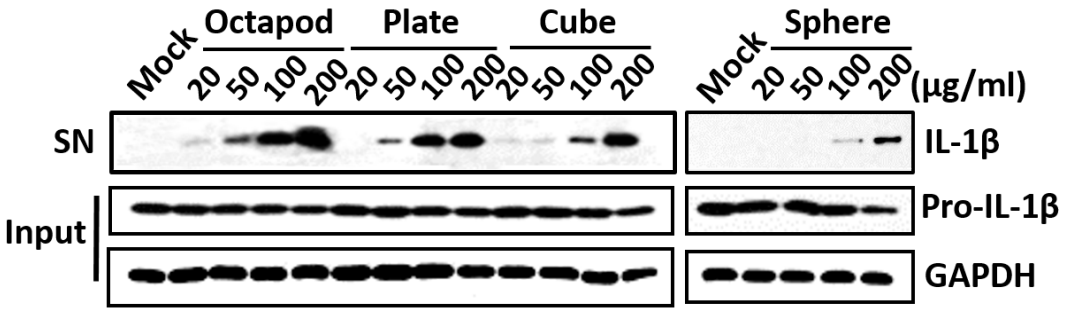

Figure S4. LPS-primed BMDMs were treated for 6 hr with increasing doses of different IONPs and subject to Western blot. Shown are IL-1β in culture supernatants (SN) and IL-1β precursor (pro-IL-1β) in the whole cell lysates (Input).

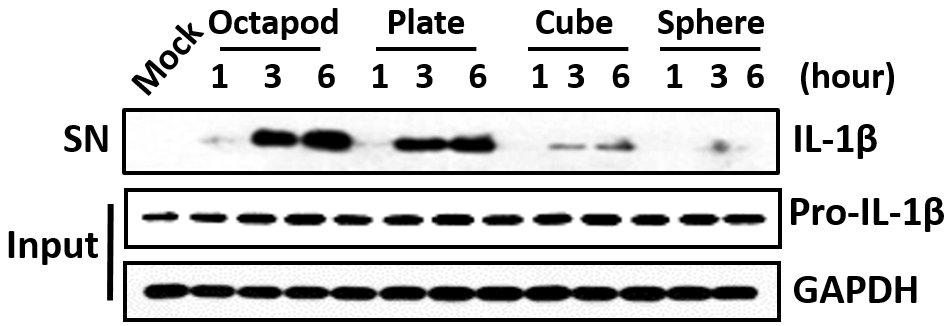

Figure S5. LPS-primed BMDMs were treated with different IONPs at a concentration of 100 μg/mL for different time points and subject to Western blot. Shown are IL-1β in culture supernatants (SN) and IL-1β precursor (pro-IL-1β) in the whole cell lysates (Input).

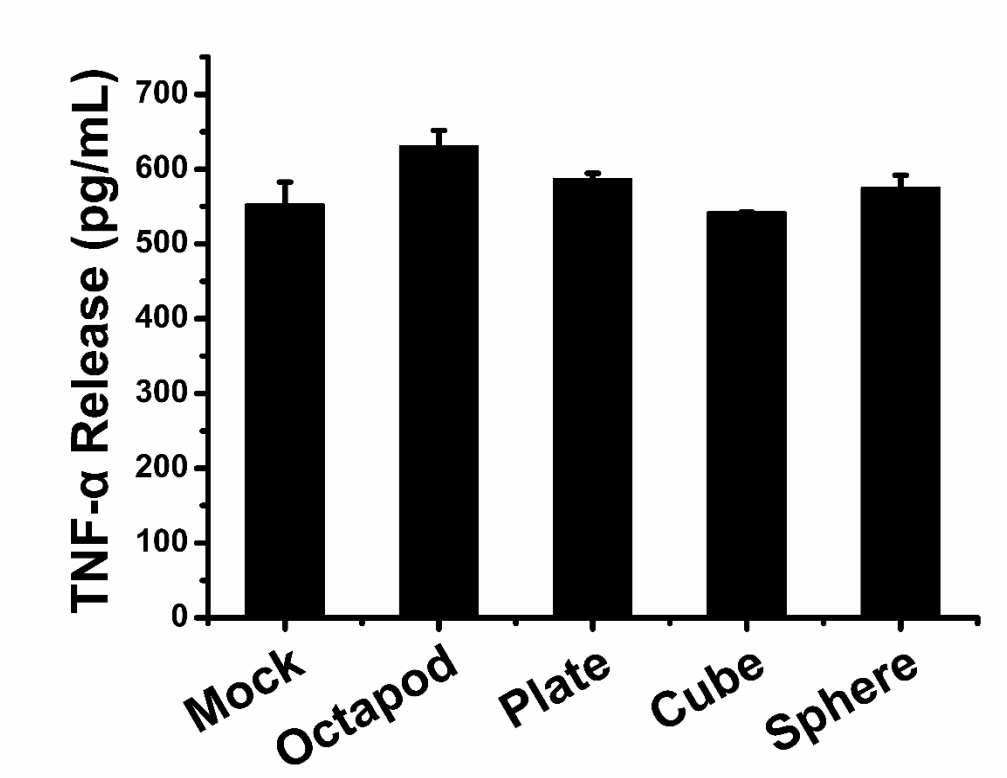

Figure S6. LPS primed BMDMs were treated with different IONPs at a concentration of 100 μg/mL for 6 hr. Culture supernatants were analyzed by ELISA for TNF-α release. Mean ± SEM, n=3.

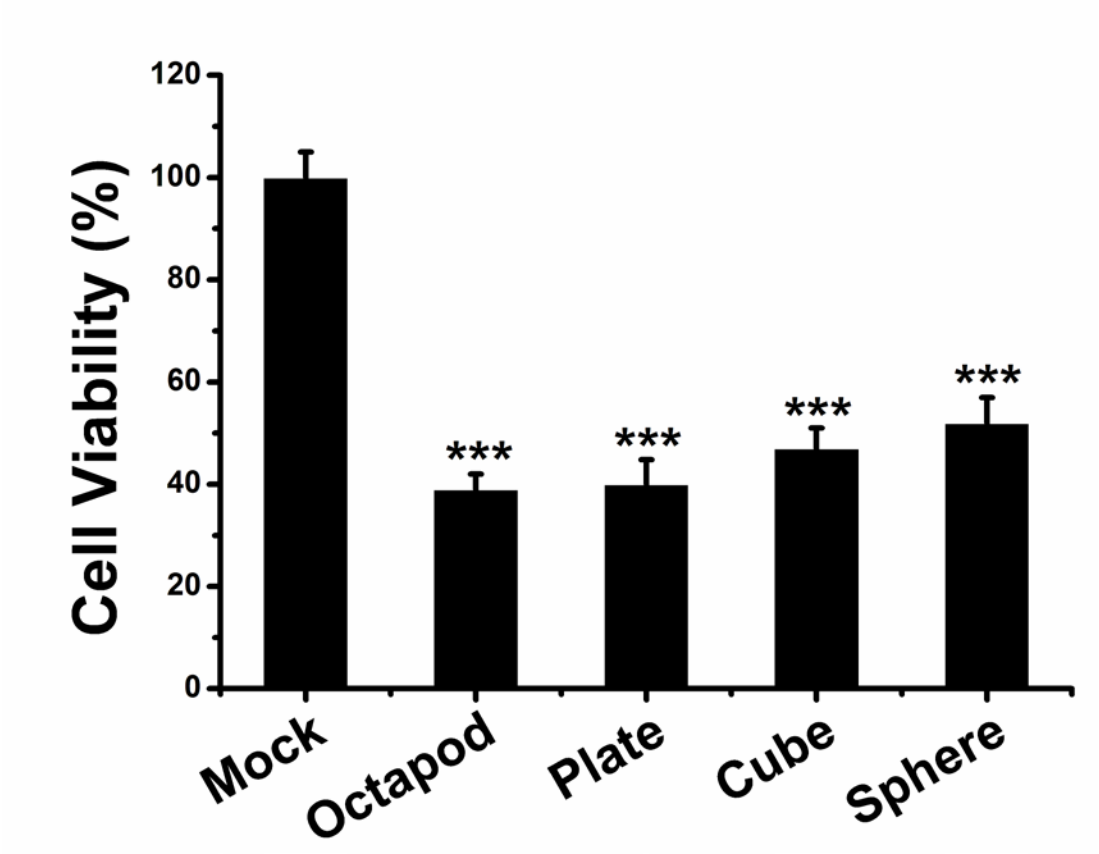

Figure S7. CCK-8 assay of PMA-differentiated THP-1 cells treated with different IONPs for 6 hr at a concentration of 100 μg/mL. Mean ± SEM, n=3. *** $p<0.001$.

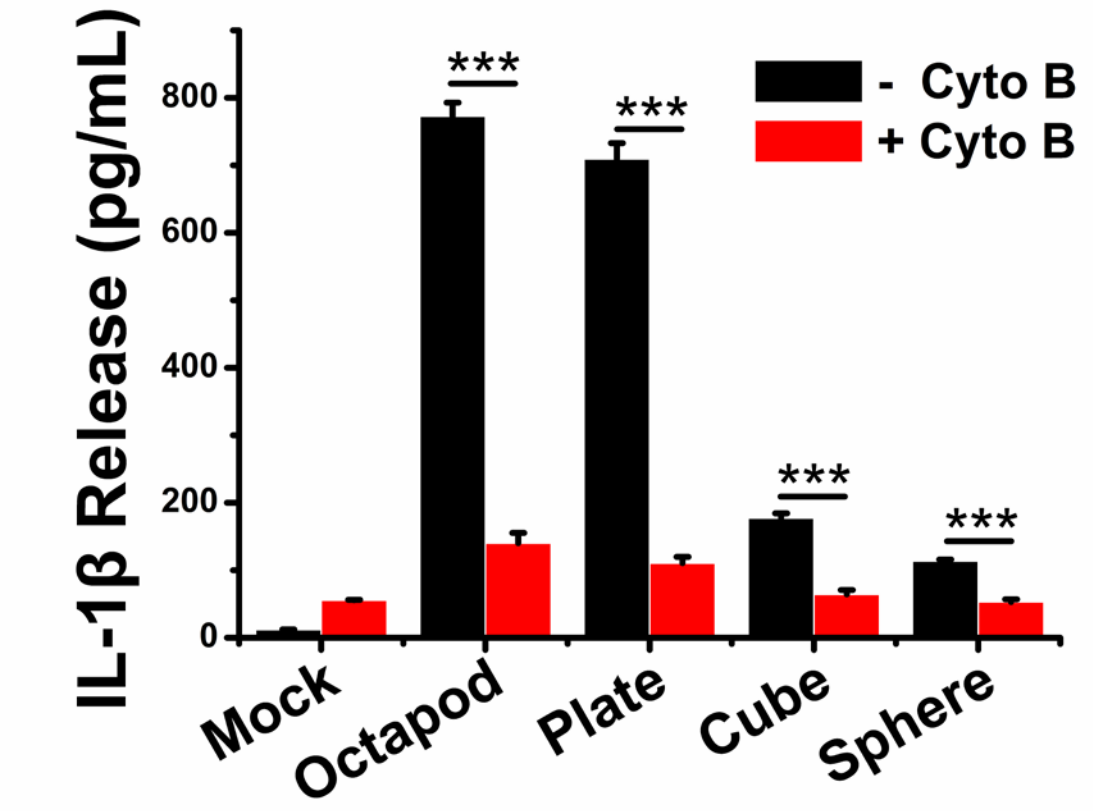

Figure S8. LPS-primed BMDMs were treated for 30 min with 10 μM Cytochalasin B, followed by treatment with different IONPs at a concentration of 100 μg/mL for 6 hr. Culture supernatants were analyzed by ELISA for IL-1β release. Mean ± SEM, n=3. *** $p<0.001$.

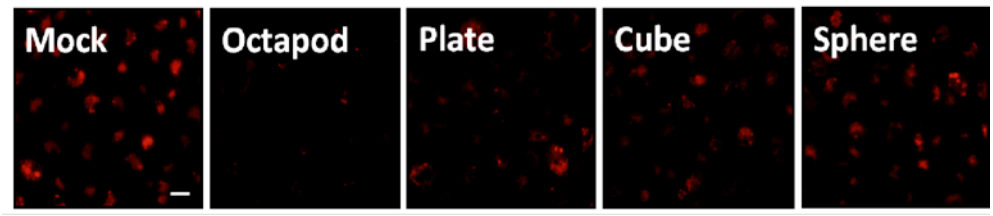

Figure S9. LPS-primed BMDMs were treated with different IONPs at a concentration of 100 μg/mL for 6 hr, then stained with Lysotracker Red (5 μM) for 30 min. Cells were visualized under fluorescence microscope. Scale bar, 50 μm.

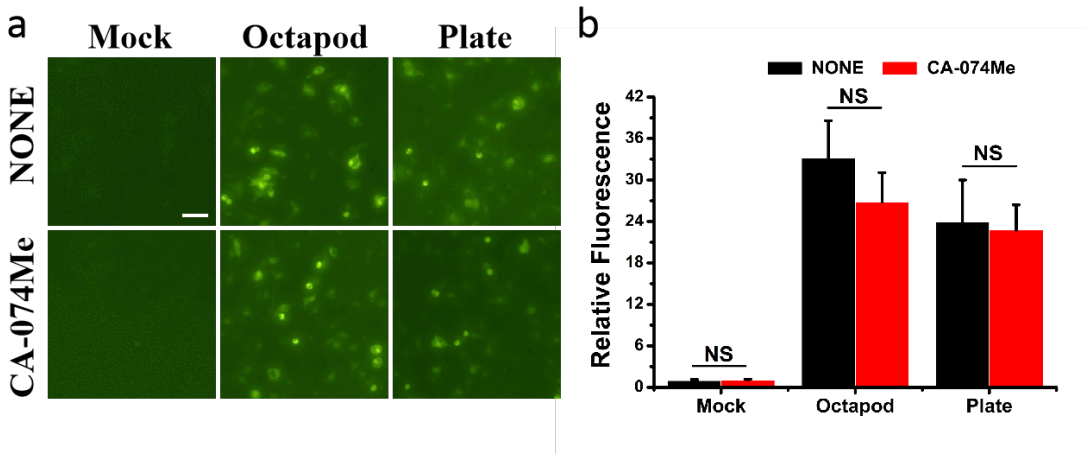

Figure S10. LPS-primed BMDMs were treated with different IONPs at a concentration of 100 μg/mL for 6 hr in the presence or absence of CA-074Me (10 μM). Cells were stained with DCFH-DA (10 μM) for 20 min and then visualized under fluorescent microscope. The right panel shows the quantified results for the fluorescence intensity change of ROS, with the Mock value set at 1 and the other values normalized accordingly. Scale bar, 50 μm. Mean ± SEM,n=3. NS＞0.05.