C-S Shi et al. Supplementary Figure 1

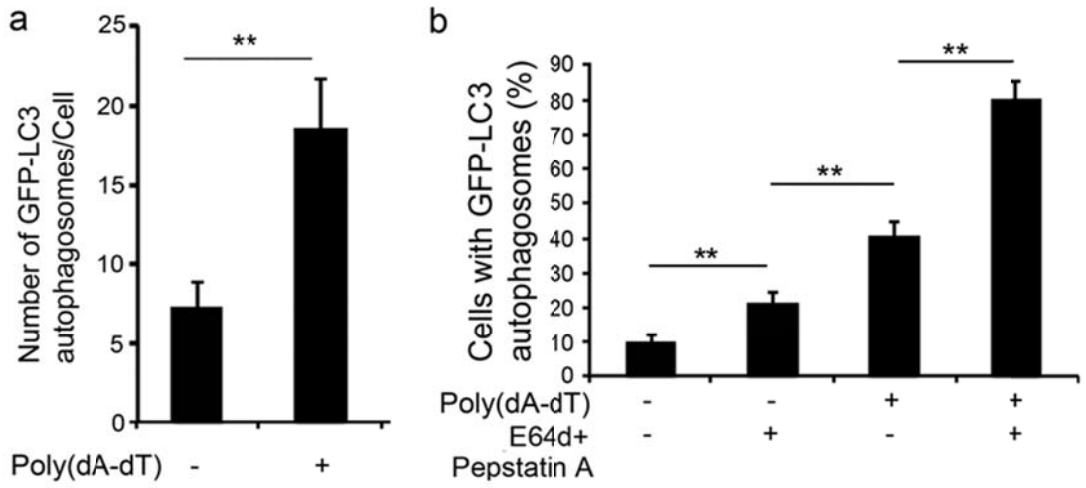


**Figure 1** Poly(dA-dT) induces autophagy**.** (**a**) GFP dots in differentiated THP-1 cells expressing GFP-LC3 transfected with 1.5 μg/ml poly(dA-dT) or sham transfected. Six hours later the numbers of GFP aggregates per GFP positive cell were enumerated. The results are from one of two experiments performed, p value < 0.01. (**b**) GFP dots in differentiated THP-1 cells treated with lysosome inhibitors for 5h, or not, transfected with poly(dA-dT) 1h prior to the addition of the inhibitors. E64d+Pepstain A were used at 5 μg/ml. Results are from three experiments, p values < 0.01 (**).

C-S Shi et al. Supplementary Figure 2

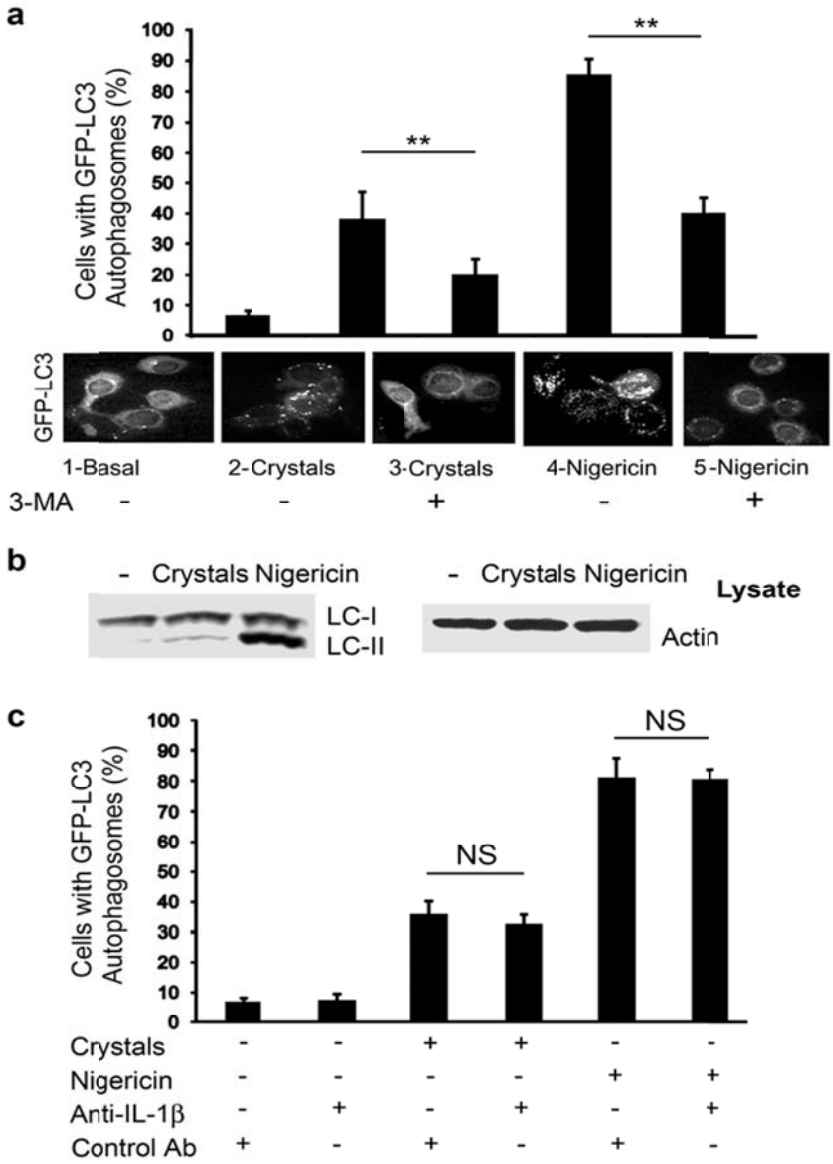


**Figure 2** Activation of the NLRP3 inflammasome triggers autophagy in macrophages. (**a**) GFP dots in differentiated THP-1 cells stably expressing GFP-LC3 treated with uric acid crystals (50 μg/ml) or nigericin (4 μM) for 5h during which time the cells were exposed to 3-MA (5mM) or not. Representative images of individual cells are shown below. Results are mean and standard deviation of three experiments, $p < 0.01$ (**). (**b**) Immunoblot of LC3 processing following exposure of differentiated THP-1 treated with either uric acid crystals or nigericin as above. The levels of actin in the cell lysates are shown to right. (**c**) The percentage of GFP dots in GFP-LC3 expressing differentiated THP-1 cells treated with the uric acid crystals, nigericin, or not, in the presence of either neutralizing antibodies to IL-1β or control antibodies. Results are mean and standard deviation of three experiments performed. NS- non significant.

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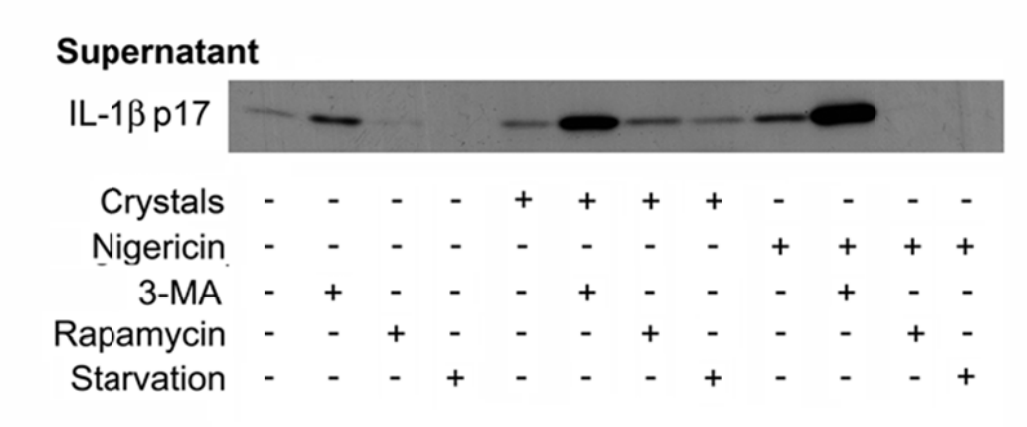


**Figure 3** Autophagy affects the activity of NLRP3 inflammasomes. Differentiated THP-1 cells were treated with Uric acid crystals (50 μg/ml), nigericin (4 μM) or not for 5h in the presence or absence of 3-MA (5 mM), rapamycin (25 nM), or serum starved. The levels IL-1β in the culture media were measured by immunoblotting. Results are representative of one of three experiments performed.

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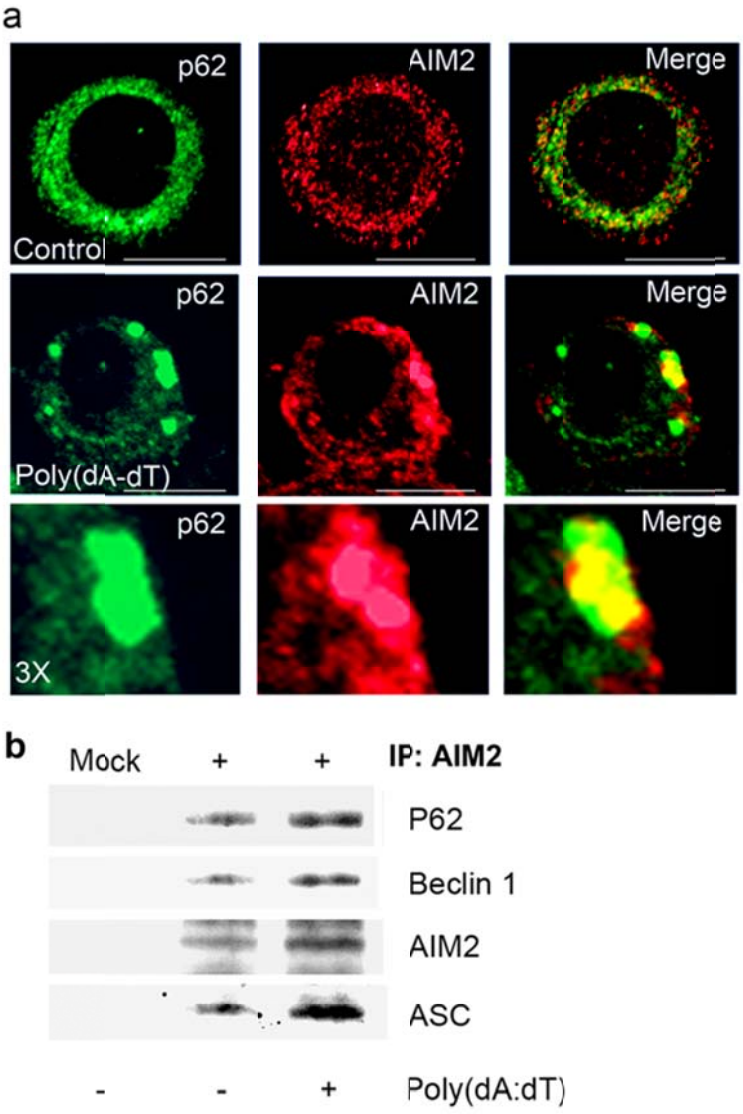


**Figure 4** AIM2 partially co-localizes with p62. (**a**) Confocal microscopy of differentiation THP1 cells transfected with 1.5 μg/ml poly(dA-dT) for 2h, or not, and immunostained for AIM2 and p62. Shown below is a 3X electronic zoom of the confocal image. (**b**) Immunoblot of AIM2 immunoprecipitates from differentiated THP-1 cells transfected with poly(dA-dT) for 2h, or not, to detect Beclin-1 and AIM2. The immunoblot was subsequently stripped and re-blotted for ASC and p62. Scale bars shown are 10 μm. Experiment performed twice.

C-S Shi et al. Supplementary Figure 5

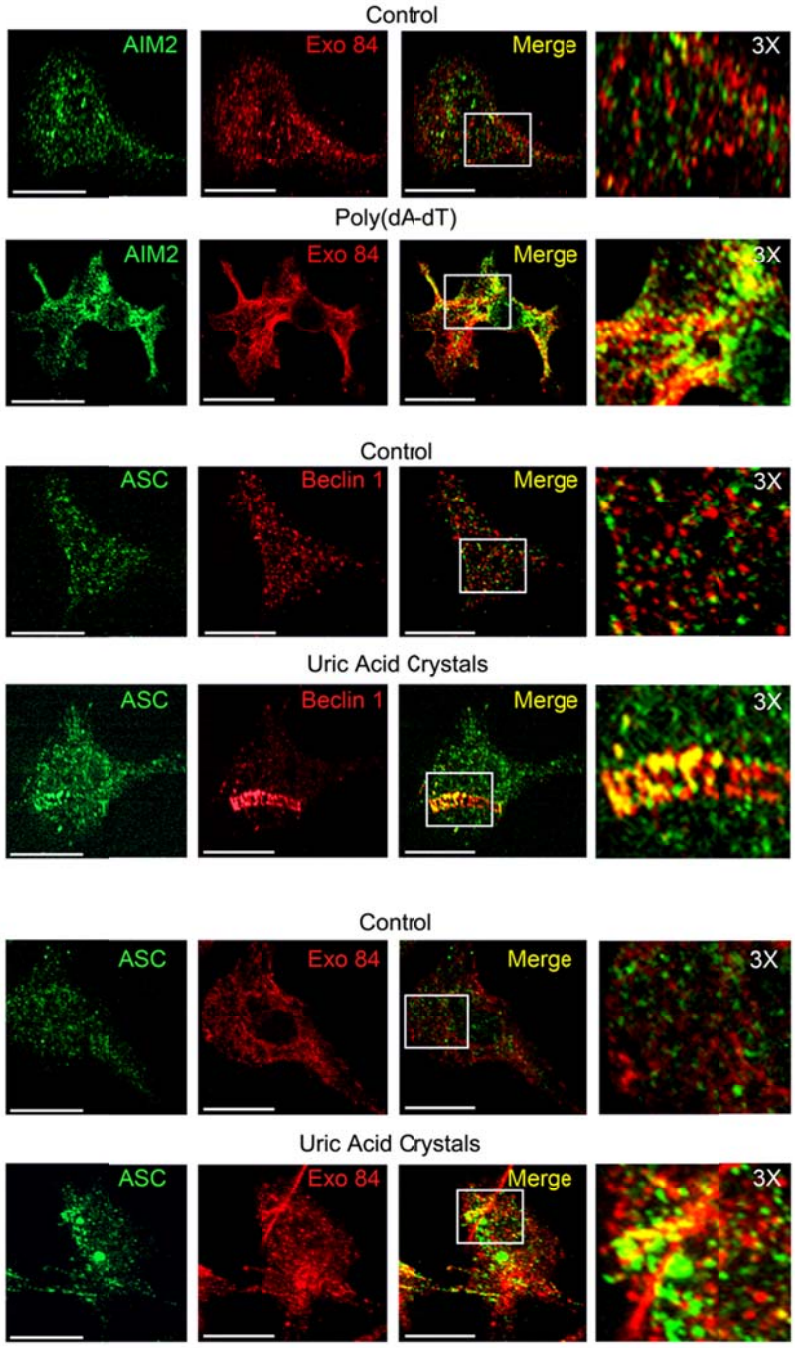


**Figure 5** Poly(dA-dT) and crystals trigger co-localization of proteins involved in inflammasomes and autophagy. Confocal microscopy of mouse BMDM primed with LPS (20 ng/ml) for 2 hours and exposed to 1.5 μg/ml poly(dA-dT) for 30 minutes, uric acid crystals (50 μg/ml) for 2 hours, or not stimulated immunostained as indicated. The images on the right are a 3X electronic zoom of the area outlined by the white square. Scale bars shown are 10 μm. Experiments performed three times.

C-S Shi et al. Supplementary Figure 6

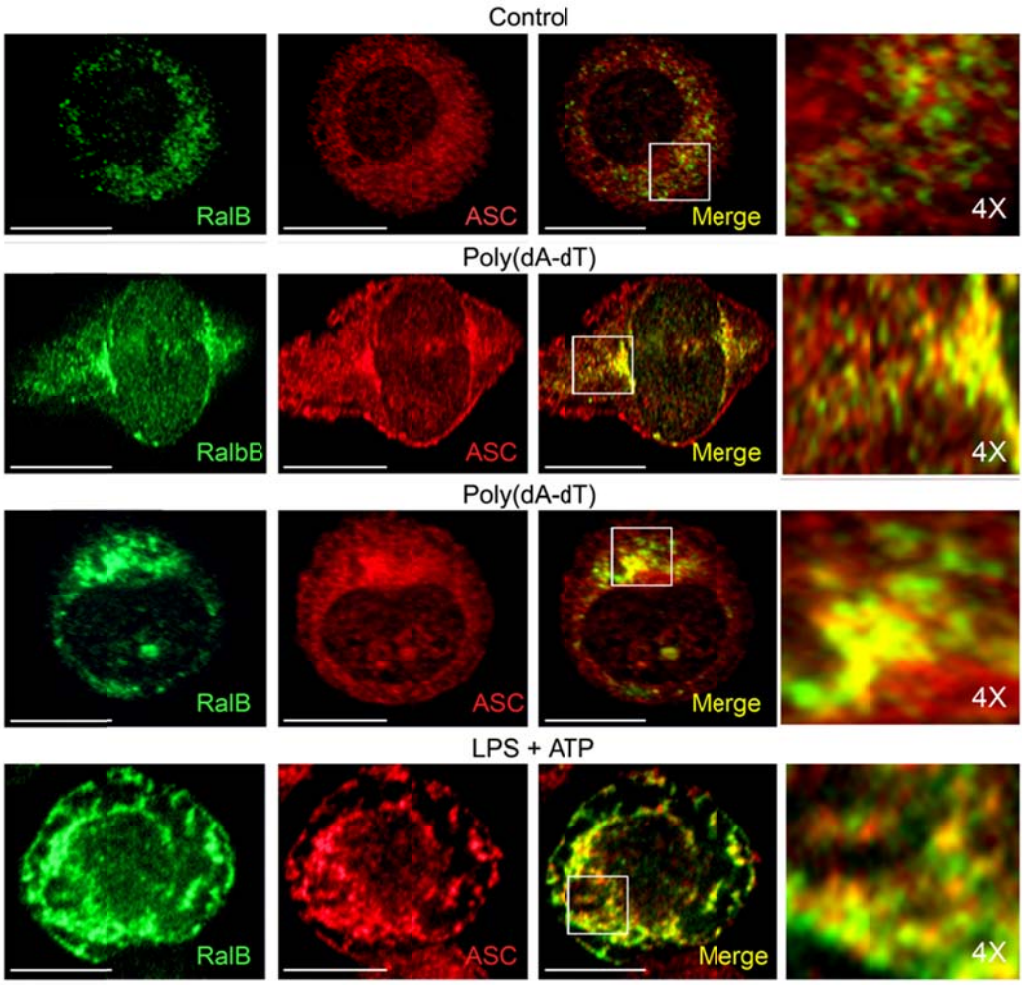


**Figure 6** ASC and RalB partially co-localize following activation of either AIM2 or NLRP3 inflammasomes in THP-1 cells. Confocal microscopy of differentiated THP-1 cells primed with LPS (20 ng/ml) for two hours and then stimulated for 1h with either 1.5 μg/ml poly(dA-dT) or 30 minutes with LPS (400 ng/ml) plus ATP (5 mM), or not stimulated and immunostained for RalB and ASC. Single and merged images from representative cells are shown. The images on the right are a 4X electronic zoom of the area outlined by the white square. Scale bars shown are 10 μm.