Supplementary Figure Legends

Supplementary Figure 1

ZFP91 up-regulates the production and activation of pro-IL-1β in THP-1 cells. (A) PMA-differentiated THP-1 cells were transduced with lentiviruses containing ZFP91 gene using multiplicities of infection (MOI) of 10, 50, and 100 for 24 h and then stimulated with 1 μg/ml LPS for 6 h. The protein levels of IL-1β were measured by western blot analysis. (B) PMA-differentiated THP-1 cells were transduced with lentiviruses containing ZFP91 gene for 24 h and then un-stimulated or stimulated with 1 μg/ml LPS for 6 h. The protein levels of IL-1β and pro-IL-1β were measured by western blot analysis.

Supplementary Figure 2

ZFP91 enhances the expression of non-canonical caspase-8 inflammasome components in THP-1 cells. (A) PMA-differentiated THP-1 cells were transduced with lentiviruses containing ZFP91 gene using MOI of 10, 50, and 100 for 24 h and then stimulated with 1 μg/ml LPS for 6 h. The protein levels of caspase-8 and cleaved caspase-8 were measured by western blot analysis. (B) PMA-differentiated THP-1 cells were transduced with lentiviruses containing ZFP91 gene (MOI = 100) for 24 h and then un-stimulated or stimulated with 1 μg/ml LPS for 6 h. The protein levels of NLRP3, ASC, and cleaved caspase-8 were measured by western blot analysis.

Supplementary Figure 3

Silencing of NLRP3, ASC or caspase-8 reduced the production of IL-1β in LPS-stimulated THP-1 cells. PMA-differentiated THP-1 cells were transduced with lentiviruses carrying NLRP3, ASC or caspase-8 siRNA (MOI = 100) for 24 h and then

stimulated with 1 μg/ml LPS for 6 h. IL-1β was detected by ELISA. Data are the mean ± SD of five independent experiments. $^{###}P < 0.001$ vs. control group (cultured in medium alone); $^{*}P < 0.05$ vs. LPS-induced group. The protein levels of pro-IL-1β, NLRP3, ASC and cleaved caspase-8 were measured by western blot analysis.

Supplementary Figure 4

ZFP91 enhances the activation of MAPKs in THP-1 cells. (A) PMA-differentiated THP-1 cells were transduced with lentiviruses containing ZFP91 gene (MOI = 100) for 24 h and then un-stimulated or stimulated with 1 μg/ml LPS for 6 h. The protein levels of p-ERK, p-p38, p-JNK, ERK, p38 and JNK were measured by western blot analysis. (B) PMA-differentiated THP-1 cells were transduced with lentiviruses containing ZFP91 gene (MOI = 100) for 24 h and then un-stimulated or stimulated with 1 μg/ml LPS for 6 h. Nuclear extracts were analyzed by western blot using indicated antibodies for p65 and Topo-I. Cytoplasmic extracts were analyzed by western blot using indicated antibodies for p65 and tubulin.

Supplementary Figure 5

The inhibitor of ERK, p38, or JNK reduced the production of pro-IL-1β in LPS-stimulated THP-1 cells. PMA-differentiated THP-1 cells were stimulated with 1 μg/ml LPS alone or with ERK inhibitor (50 μM), p38 inhibitor (25 μM), JNK inhibitor (50 μM) for 6 h. The protein levels of pro-IL-1β, p-ERK, ERK, p-p38, p38, p-JNK and JNK were measured by western blot analysis.