



**Figure A in S1 Text. Decreased acetylation of histone H4K16 was observed in the presence of  $As_2O_3$  HeLa or HEK293T cells. (Left panel)** Global modification levels of histone H4 at specific lysine site in  $As_2O_3$ -exposed HeLa cells. HeLa cells were cultured in 24-well cell culture plates in DMEM medium containing 10% fetal bovine serum. Cells were then grown to 30 % confluence, and treated with 0.8  $\mu M$   $As_2O_3$  for 48 hours. Global modification on histone H4 or H3 and hMOF protein status in  $As_2O_3$ -presented HeLa cells were exhibited by immunofluorescence with indicated acetylation-specific antibodies. **(Right panel)** Significant reduction of histone H4K16ac levels in  $As_2O_3$ -exposed HEK293T cells. Cells were exposed to  $As_2O_3$  in indicated concentration. 48 hours later, whole-cell extracts (WCE) were prepared and proteins were subjected to SDS-PAGE (12% or 18% gel). hMOF and acetylated specific residues on histone H4 were detected with indicated antibodies. GAPDH and H2B are as the internal control.