



Supplementary Figure 1.

(a) Immunofluorescence analysis of mESCs showing arsenic-enhanced PML NBs and endogenous SUMO1 (left) or SUMO2 (right) recruitment into PML NBs. (b) Confocal analysis of endogenous mouse PML in leukemic bone marrow from APL mice, showing fast PML NBs reorganization during arsenic kinetic. Mean intensity Z-section projections are shown. Scale bar: 5 μ m. (c) His-pull-down from liver as indicated, showing increase in PML sumoylation and/or expression upon arsenic and/or pl:C injection, and free His₆-HASUMO1. (d) Confocal analyses of liver cryo-sections from His₆-HA-SUMO1 mice showing increase endogenous PML, SUMO1 or SUMO2/3 at PML NBs upon the indicated treatment. (e) Quantification of the SUMO2/3 conjugates after His-pull-down from 0.5h-arsenic-treated mESCs relative to paired untreated cells (Fig. 1d right), Mean +/- s.d. of (n=9) independent experiments. **p<0.01, ****p<0.0001 two-tailed Wilcoxon-Mann-Whitney test. (f) Pull-down of His₁₀-SUMO2 conjugates from spleen of His₁₀-SUMO2 or control APL mice, as in e, showing increased sumoylation upon arsenic-induced PML NBs reassembly. Inputs indicate unconjugated SUMO2 in APL. Representative of n=3 independent experiments with 2 mice each. (g) Quantification of the conjugated SUMO1 or SUMO2/3 in liver after His-pull-down and related to paired untreated mice (Fig. 1f). Data represent n >3 independent experiments, Error bars represent s.d., ** p<0.01; *** p<0.001, Fisher's exact test. (h) His₁₀-SUMO2 conjugates, pull-down from mESCs stably expressing His₁₀-SUMO2 or the all K/R mutant version, and immunoblotted with anti-SUMO2/3 and anti-PML. Red arrows underline arsenic-increased sumoylation in His₁₀-SUMO2-expressing cells only.