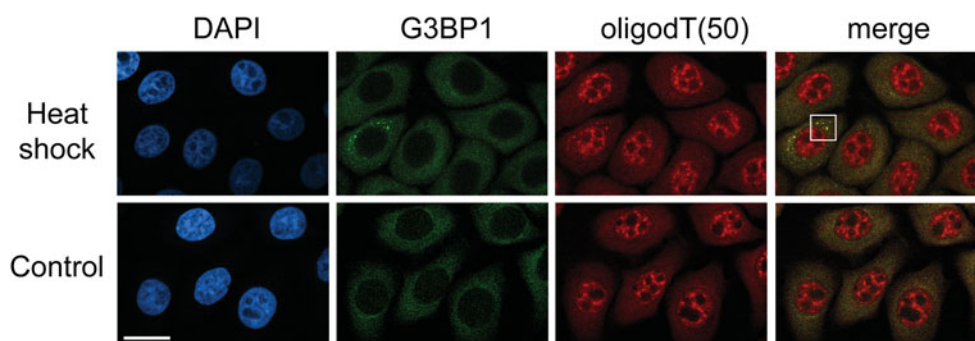


**Supplementary Figure 1.** SGs identified by G3BP1 are also stained with the SG marker protein HuR. HeLa cells were exposed to different stressors as described for Figure 1. Cells were fixed and incubated with antibodies against G3BP1 (mouse) and HuR (rabbit). Primary antibodies were detected with Cy3-conjugated anti-mouse and FITC-labeled anti-rabbit secondary antibodies. DNA was stained with DAPI; scale bar = 20  $\mu\text{m}$ . The white square marks the position of several SGs in heat-stressed cells. In merged images, yellow color indicates the colocalization of G3BP1 and HuR. Note that both G3BP1 and HuR are present in SGs.



**Supplementary Figure 2.** Heat-induced SGs contain poly(A)-RNA. HeLa cells were heat-shocked as in Figure 1 and SGs were located with G3BP1. *In situ* hybridization with oligo-dT(50) shows that heat-induced SGs are also enriched for poly(A)-RNA. DNA was stained with DAPI; scale bar = 20  $\mu\text{m}$ . After a 1 h heat shock at 45.5°C, only few cells generated SGs, and these SGs were small. The position of several SGs is emphasized by the white square.