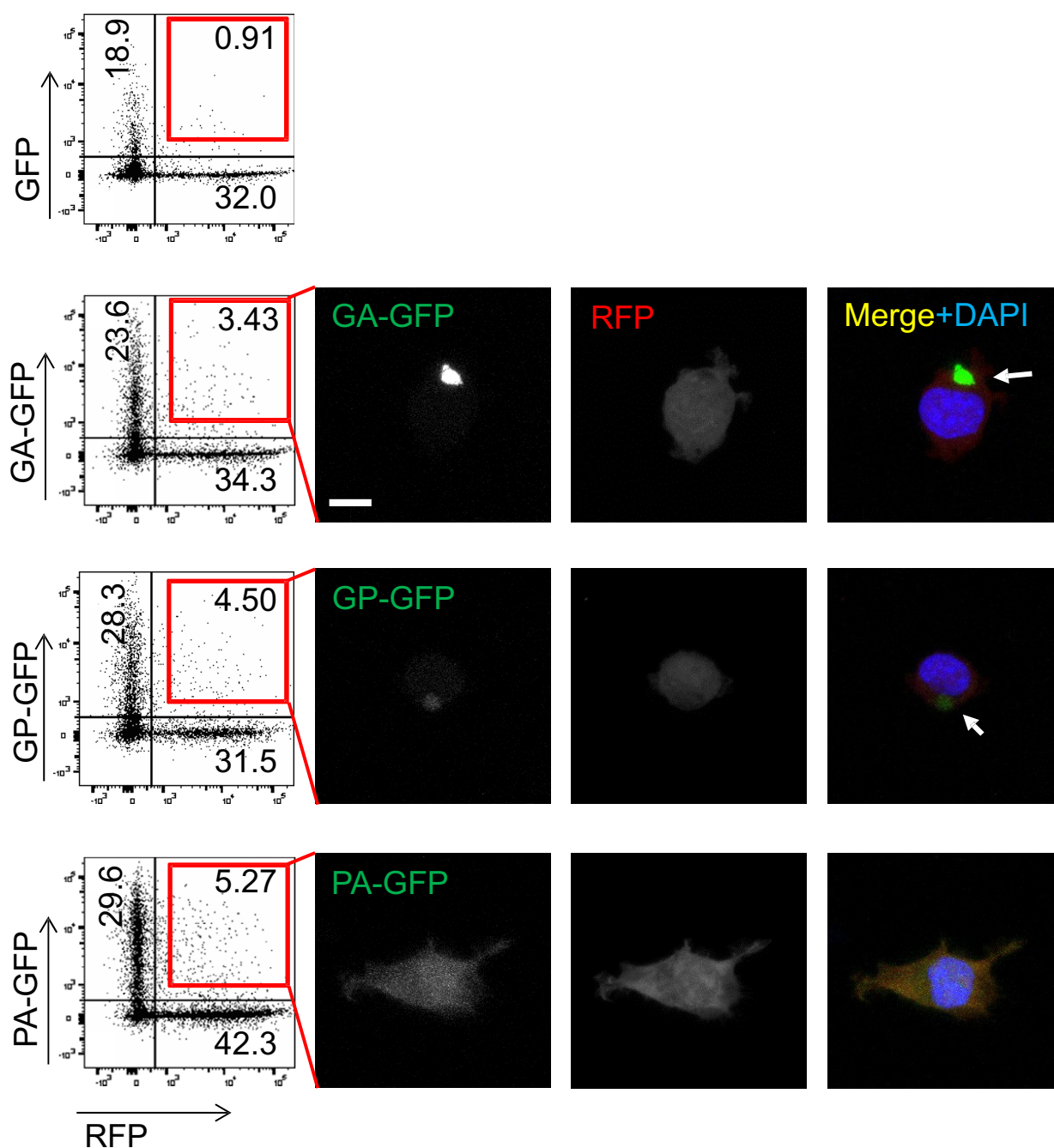
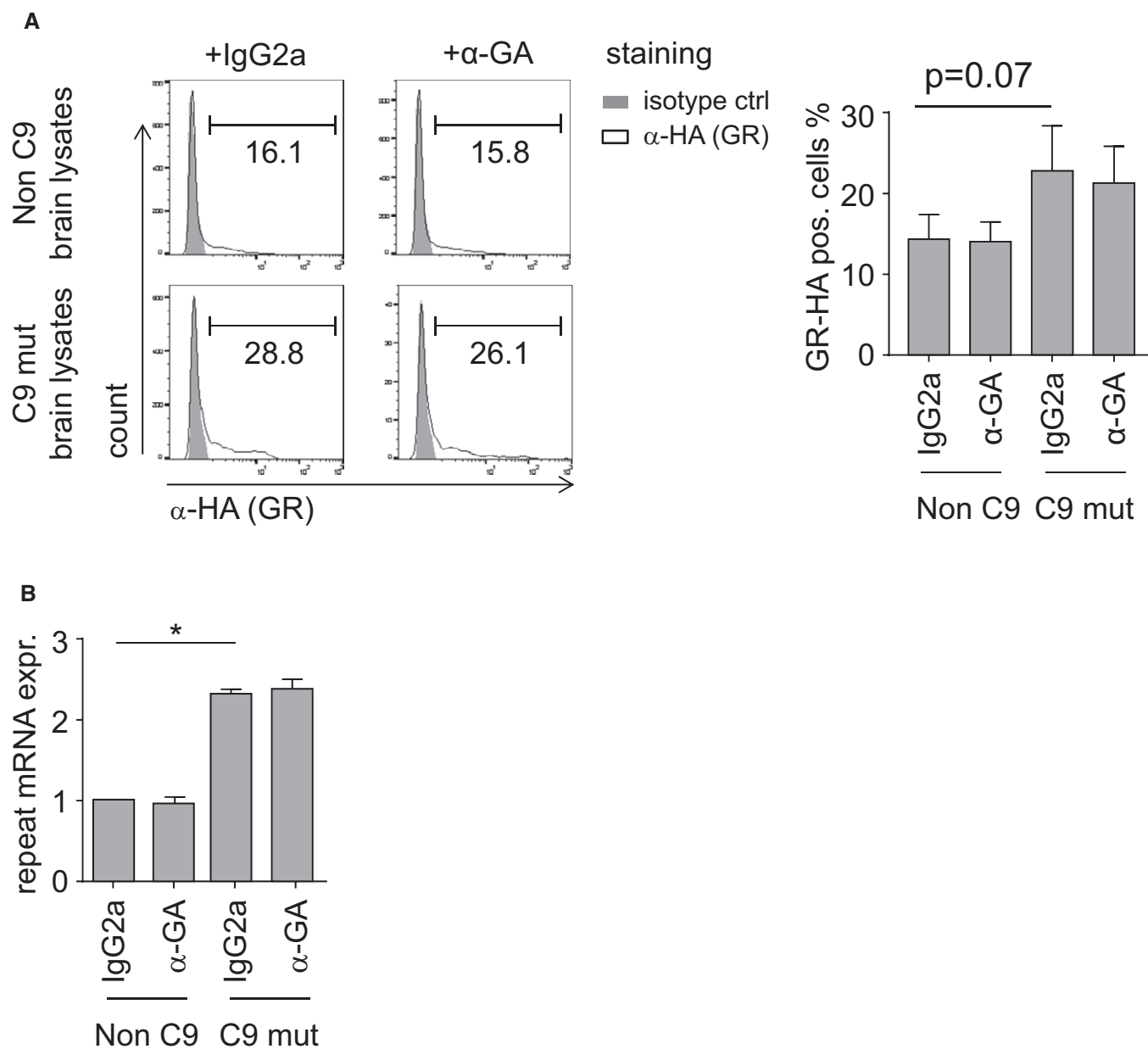


## Expanded View Figures



**Figure EV1. Transmission of hydrophobic DPR proteins in a co-culture assay.**

HEK293 cells were transfected with RFP, GFP, or DPR-GFP for 24 h and mixed in the indicated combination for additional 24 h as in Fig 2 before cell sorting by flow cytometry. Gating was performed on RFP-expressing cells vs. mixture of all green fluorescent cells. The fraction of double-positive cells is indicated in percent. Double-positive cells were sorted and plated on poly-D-lysine-coated coverslips and imaged 17 h later. Images show uptake of DPR-GFP into RFP-positive cells. Arrows indicate co-localization of GA<sub>175</sub>-RFP aggregates with GA<sub>175</sub>-GFP and GP<sub>47</sub>-GFP. Scale bar 10  $\mu$ m.



**Figure EV2. Anti-GA antibodies do not reduce expression of poly-GR and repeat RNA.**

HEK293 cells transfected with  $(G4C2)_{80}$  were treated with cerebellar extracts pre-incubated with anti-GA or isotype control.

A The fraction of RAN translation-derived GR<sub>80</sub>-HA was quantified by flow cytometry. Data indicated the means  $\pm$  SD of  $n = 3$  patients and controls in independent experiments. Statistics were performed by one-way ANOVA with Dunnett's multiple comparisons test.

B Quantitative RT-PCR shows repeat RNA transcripts upon treatment with cerebellar extracts pre-incubated with anti-GA or isotype control. Data are shown as mean  $\pm$  SD from  $n = 3$  patients and controls in independent experiments. Statistics were performed by one-way ANOVA with Dunnett's multiple comparisons test; non-C9 + IgG2a vs. C9 mut + IgG2a  $P = 0.0168$ ; \* $P < 0.05$ .