



**Supplemental Figure 1.** DO-RIP-seq analysis. (a) Schematic overview of DO-RIP-Seq. Seedlings are grown for 14 days prior to flash-freezing and whole cell lysate preparation. Lysates are cross-linked with formaldehyde, digested with RNaseI, and RNA binding proteins (here cpRNPs) are immunoprecipitated. RNAs from precipitates and from the input were analysed by next generation sequencing (NGS). (b) Immunoblots of DO-RIP-fractions from WT plants. The blots were probed with the affinity-purified CP31A antibody used in the DO-RIP-Seq assays. A band representing a cross-reacting protein is found in *cp31a* mutants slightly larger than CP31A itself (asterisk). IgGs in the immunoprecipitates (HC = heavy chain; LC = light chain) are detected by the secondary antibody used to probe the immunoblot. P, S, and I = pellet, supernatant and input fractions of DO-RIP experiments. M = Molecular mass marker. (c) Purified DO-RIP-seq libraries from pellet and input fractions were separated on a 6% Polyacrylamide gel for size-selection. The gel was stained with SYBR Gold nucleic acid gel stain and visualized on a UV transilluminator. Left: Gel with pellet samples prior to size selection. Right: Gel with input samples prior to size selection. The area excised from the gel for library purification is indicated by black, dashed bars. This area corresponds to adapter-ligated constructs derived from around 30 to 70 nucleotide RNA fragments. M = molecular mass marker.