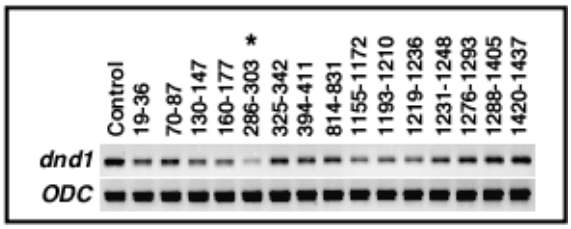

Fig. S1. Selection of antisense oligos for depletion of maternal *dnd1*. RT-PCR showing the effects of AS-oligos (10 ng) injection on the stability of endogenous *dnd1* mRNA in oocytes.

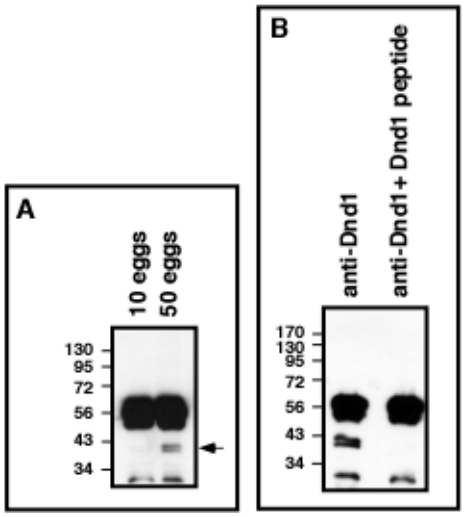

Fig. S2. Specificity of anti-Dnd1 antibody. (**A**) Western blot showing detection of the endogenous Dnd1 by the affinity-purified anti-Dnd1 antibody. Endogenous Dnd1 was enriched by immunoprecipitation from 10 and 50 eggs, respectively. Immunoprecipitation samples were separated on 10% SDS-PAGE and probed with the anti-Dnd1 antibody. (**B**) Western blot showing that endogenous Dnd1 was detected by anti-Dnd1 antibody, but not by the antibody that had been pre-absorbed with the Dnd1 peptide.

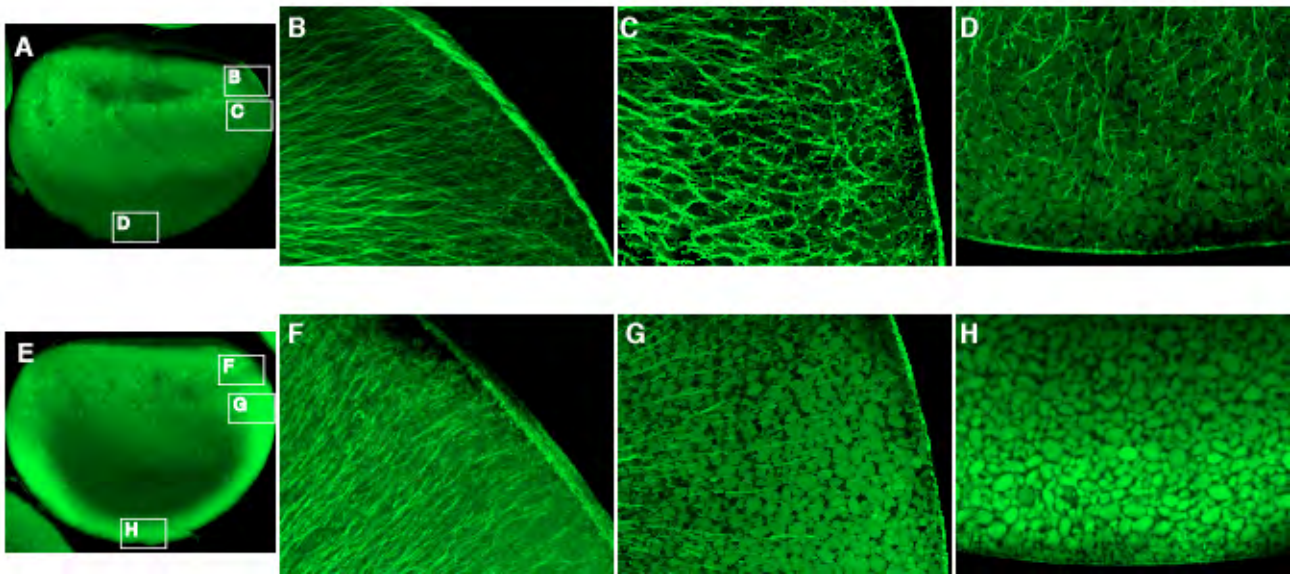

Fig. S3. Microtubule formation. Confocal images showing microtubule formation in control (**A-D**) and Dnd1 depleted (**E-H**) embryos. Embryos were harvested at 40 minutes post-fertilization. B-D and F-H are higher magnification views of the boxed areas in A and E, respectively.

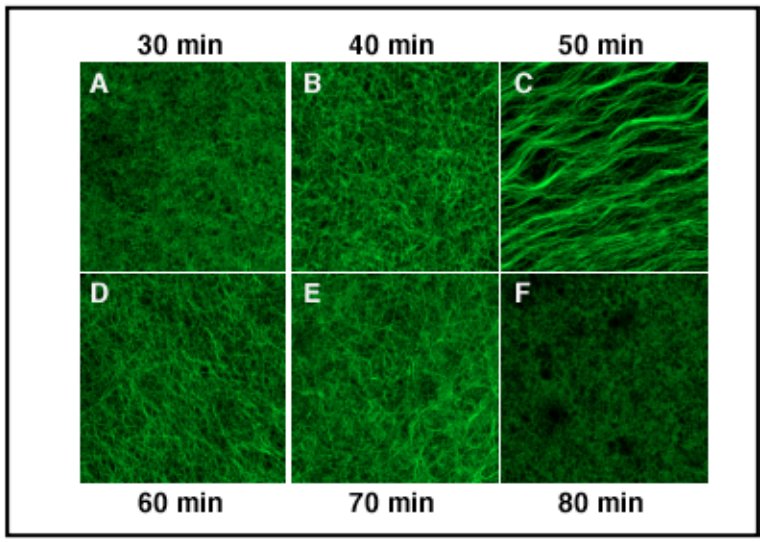

Fig. S4. Vegetal cortical microtubule dynamics in artificially activated eggs. Oocytes were treated with progesterone to induce maturation. After GVBD, eggs were pricked with a glass needle. Activated eggs were harvested at 30 (**A**), 40 (**B**), 50 (**C**), 60 (**D**), 70 (**E**) and 80 (**F**) minutes post-pricking, and stained with an anti-Tubulin antibodies. The formation of vegetal cortical microtubules was assessed by confocal microscopy.

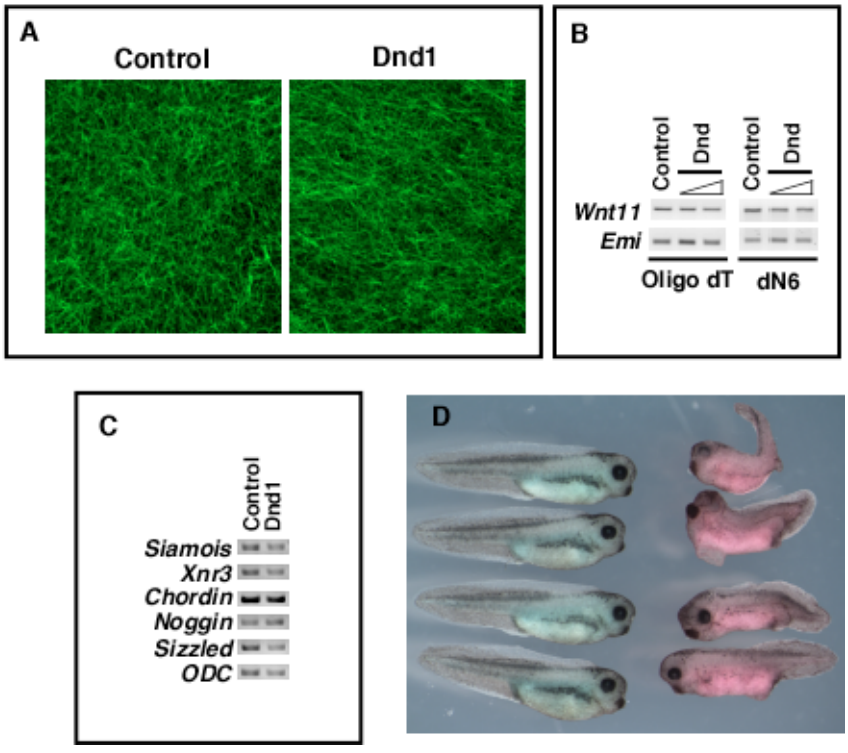

Fig. S5. Effects of Dnd1 overexpression. (**A**) Confocal images showing the formation of vegetal cortical microtubules in control and *dnd1* (500 pg) overexpressed host-transfer embryos (45 minutes post-fertilization). (**B**) Effect of Dnd1 overexpression on *wnt11* polyadenylation. Total RNA from control and Dnd1 overexpressed embryos (eight-cell stage) was reverse transcribed with oligo dT (left) and random hexamers (dN6, right). Oligo dT- and random-primed cDNAs were used as templates for PCR with *wnt11* and *Emi1* primers. (**C**) RT-PCR showing that overexpression of *dnd1* (500 pg) had no detectable effect on the expression of dorsal genes. *dnd1* RNA was injected into oocytes, allowed to translate and these oocytes were used for host transfer. Resulting embryos were harvested at stage 10.5 and analyzed for expression of *noggin, chordin, Xnr3, siamois* and *sizzled*. (**D**) Morphology of control (blue) and Dnd1-overexpressed host-transfer embryos (red).

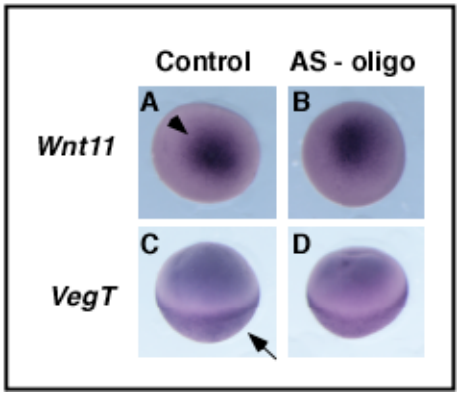

Fig. S6. Knockdown of maternal Dnd1 had no effect on vegetal localization of *wnt11* or *VegT*. (**A-D**) Whole-mount in situ hybridization showing the expression of *wnt11* (A,B) and *VegT* (C,D) in control (A,C) and AS-oligo injected (B,D) eggs. A and B are vegetal views. C and D are lateral views.