## **Supplemental Inventory**

- Figure S1, related to Figure 2. The E2a-GFP fusion protein is functional.
- Figure S2, related to Figure 3. Expression of *lefty* in E2a depleted embryos is not high enough to cause loss of bottle cells.
- Figure S3, related to Figure 4. Expression of *eomesodermin* is reproducibly reduced by E2a MO injection.
- Table S1. Supplied as excel spreadsheet, related to Figure 1. List of genes associated with each category of Smad2/3 binding.
- Table S2. Supplied excel spreadsheet, related to Figure 1. RNA-Seq expression data, normalized by FPKM.
- Supplemental Experimental Procedures.