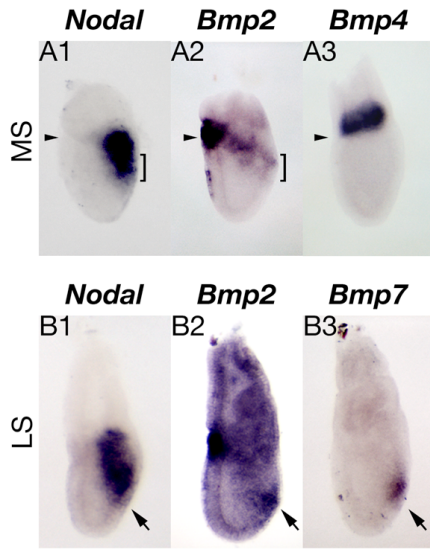
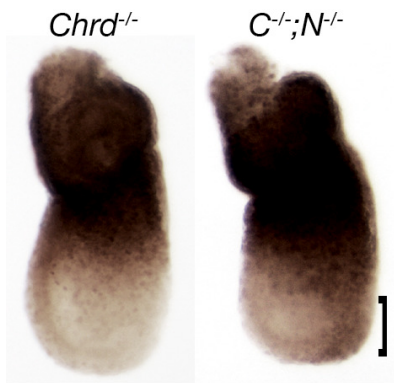


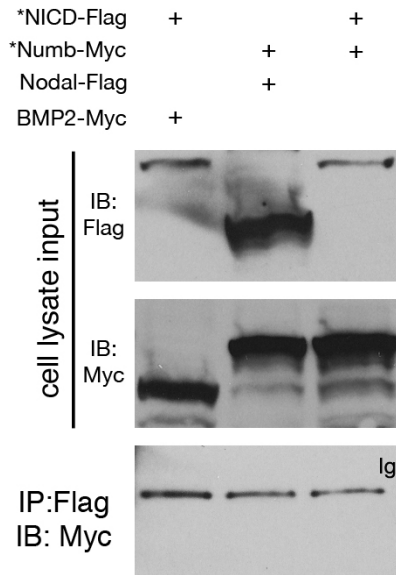
## Supplementary Data



**Figure S1:** Expression of *Nodal*, *Bmp2*, *Bmp4* and *Bmp7* in early gastrulating embryos at MS (A1-A3) and LS (B1-B3) stages. *Nodal* mRNA is detected in the primitive streak in close vicinity to *Bmp2* expression at MS (A1,2 brackets), but was more distant from *Bmp4* expression (A3). Arrowheads denote the extra-/embryonic junction. *Nodal* is expressed in the APS region close to *Bmp2* and *Bmp7* at LS (B1-3, arrows).



**Figure S2:** Immunostaining of pSmad1/5/8 in *Chrd*<sup>-/-</sup> (as a control; left) and *Chrd*<sup>-/-</sup>;*Nog*<sup>-/-</sup> (*C*<sup>-/-</sup>;*N*<sup>-/-</sup>; right) gastrula. While pSmad1/5/8 signaling is excluded from the distal epiblast of the *Chrd*<sup>-/-</sup> embryo, ectopic staining was identified in the anterior primitive streak area of the *Chrd*<sup>-/-</sup>;*Nog*<sup>-/-</sup> embryo (bracket).



**Figure S3:** Bmp2-Myc or Nodal-Flag does not co-immunoprecipitate with non-specific epitope tagged proteins. Co-immunoprecipitation assays were performed using cell lysates from the following: Lane 1, co-expression of Bmp2-Myc and NICD-Flag (using the Notch intracellular domain); and Lane 2, co-expression of Nodal-Flag and Numb-Myc. Co-immunoprecipitation from either was not detected.