



**Figure S2.** Levels of H3R2me2 are differentially distributed in the blastomeres of the 4-cell stage embryo. Freshly collected late four cell stage embryos were processed for immunostaining with the H3R2me2 antibody and scanned under confocal microscopy. Sections were taken every 0.8  $\mu\text{m}$ . The levels of fluorescence were quantified in projections including all sections using the Volocity software and normalised against the blastomere showing the highest level, which was set at 100%. Decreasing values of fluorescence were calculated, normalised in each embryo and averaged accordingly ( $n=7$ ). Each bar represents the relative fluorescence level of each of the 4-cell stage blastomeres. Shown is the projection of a representative embryo that include all sections, which were taken every 0.8  $\mu\text{m}$ . DNA was stained with TOTO-3. Scale bar 50  $\mu\text{m}$ .