

Supplemental figure legends:

Supplemental figure 1: Individual peptide log₂fc(PSM) for the ARVCF/p120-catenin orthogroup.

A. Heatmap showing the peptides identified for the ARVCF/p120-catenin orthogroup. Peptides are on the y-axis and the associated protein is on the x-axis. Color represents the Log₂fc(PSM) change comparing cdh3-GFP to the GFP-alone control.

Supplemental figure 2: Superficial localization of Cdh3, vinculin, testin, and ARVCF.

A. Image showing the superficial localization of cdh3-GFP (green) and actin (magenta). Cdh3 can be observed as plaques associated with protrusive structures, white arrowheads.

B. Image of the superficial localization of vinculin (green) which can be observed in protrusions and in plaque type structures, white arrowheads.

C. Image of the superficial localization of testin (green). Testin is present in protrusions and superficial plaque structures, white arrowheads.

D. Image of the superficial localization of ARVCF (green). ARVCF is observed in protrusions, white arrowheads, and is enriched at cell-cell contacts, yellow arrowheads.

Supplemental figure 3: Explant buckling in the semi-rigid gel.

A. Explant embedded in a semi-rigid gel converged mediolaterally in the first 2.5 hrs and buckled at 3 hr. Black outline, explant-gel interface. Dashed line, explant midline. White arrow, the direction of the out-of-plane buckling.

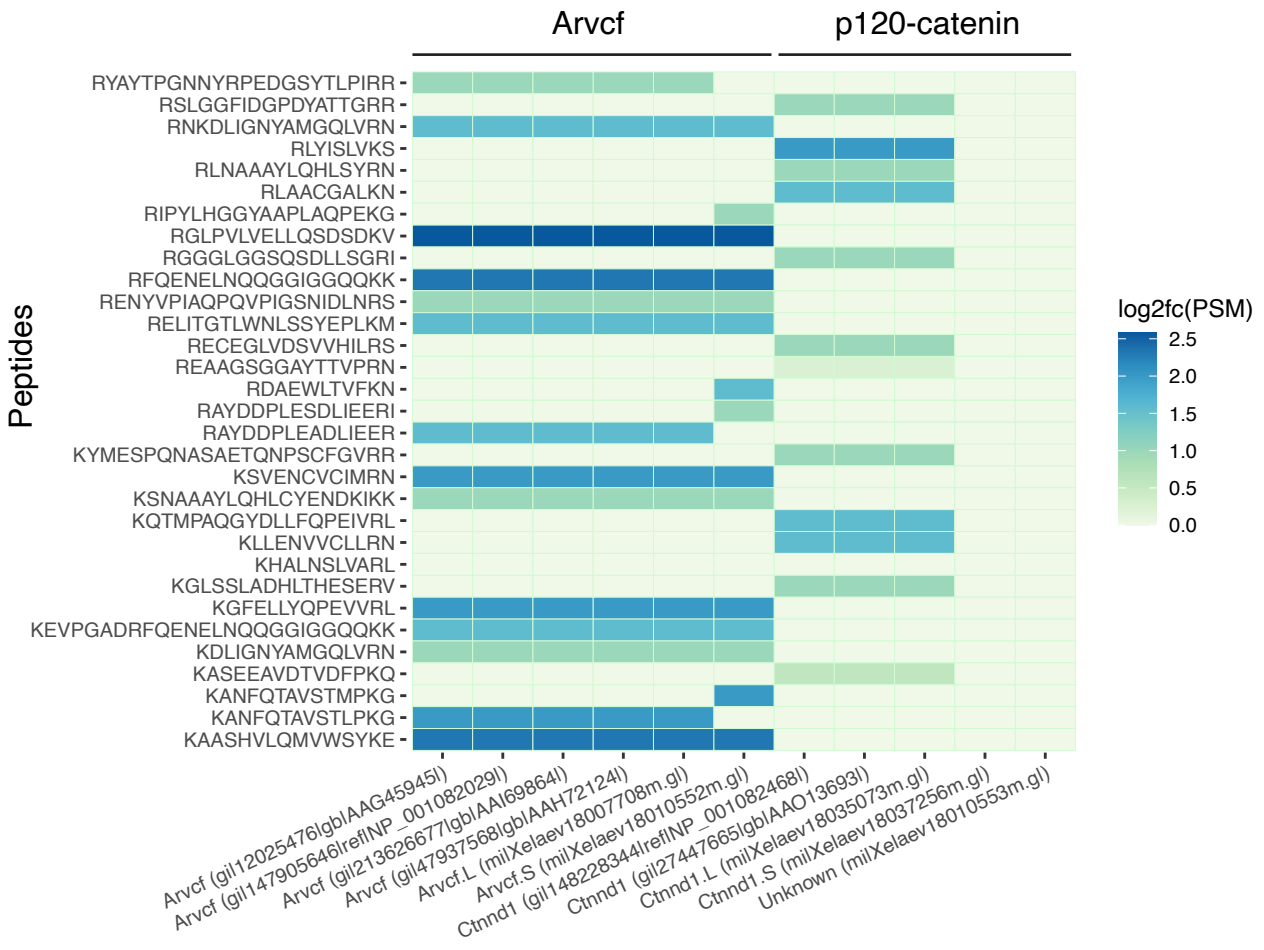
B. Outline of the explant during convergent extension. Black arrow, sudden change of the explant shape indicating a buckling happened.

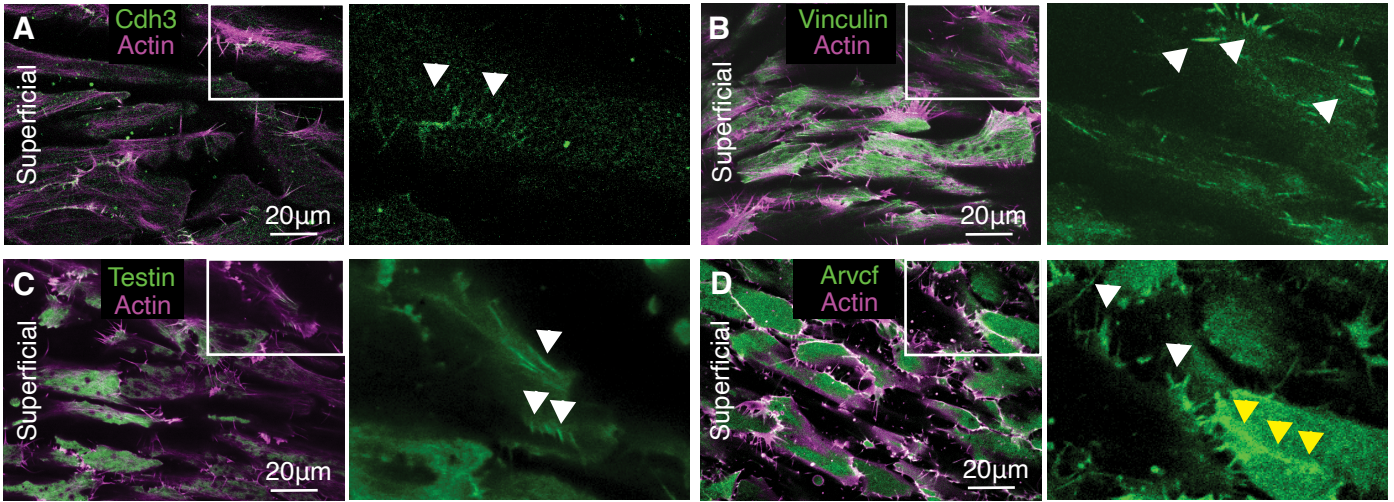
Supplemental figure 4:

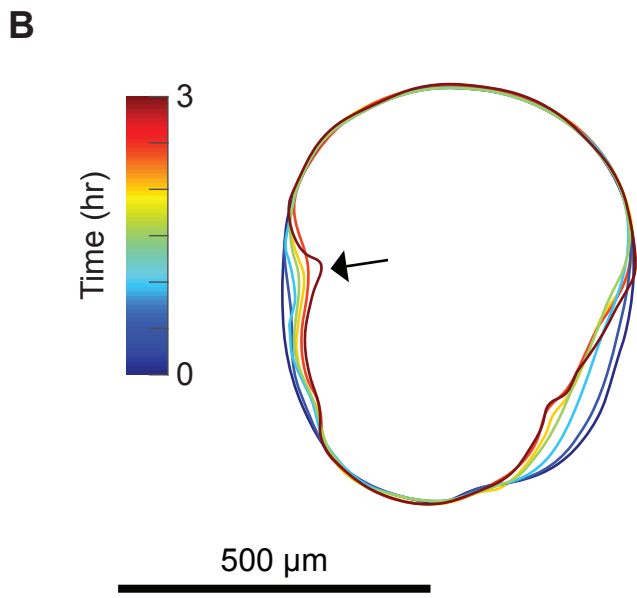
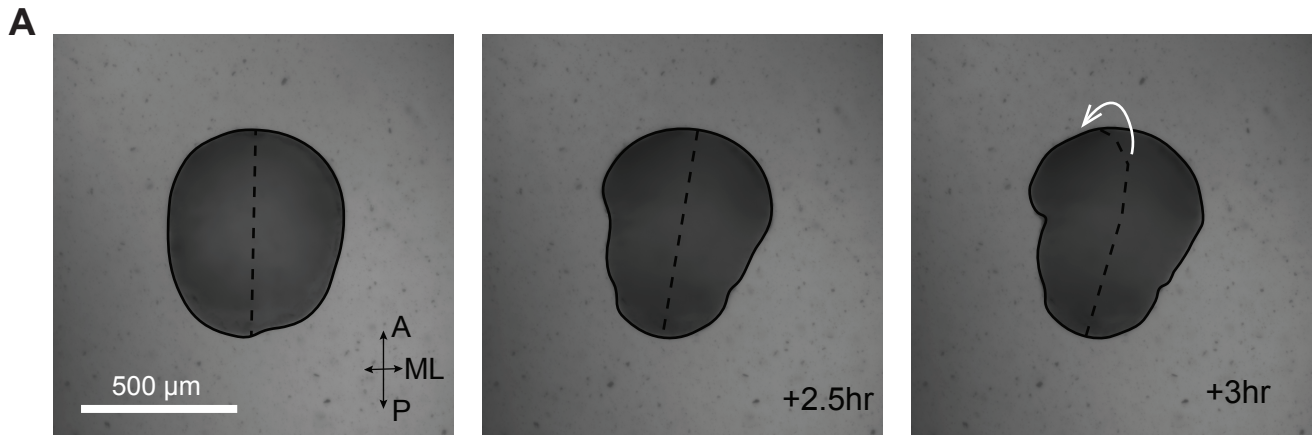
A. Graph showing the mean cross correlation between Cdh3 and actin at wildtype non-shortening junctions.

A'. Heatmap displaying the cross correlations for each individual wildtype non-shortening junctions.

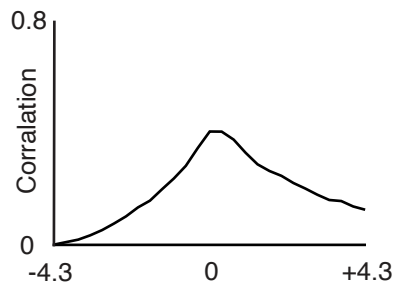
Arvcf and p120-catenin orthogroup







A non-shortening average cross correlation



A' non-shorteningtotal cross correlation

