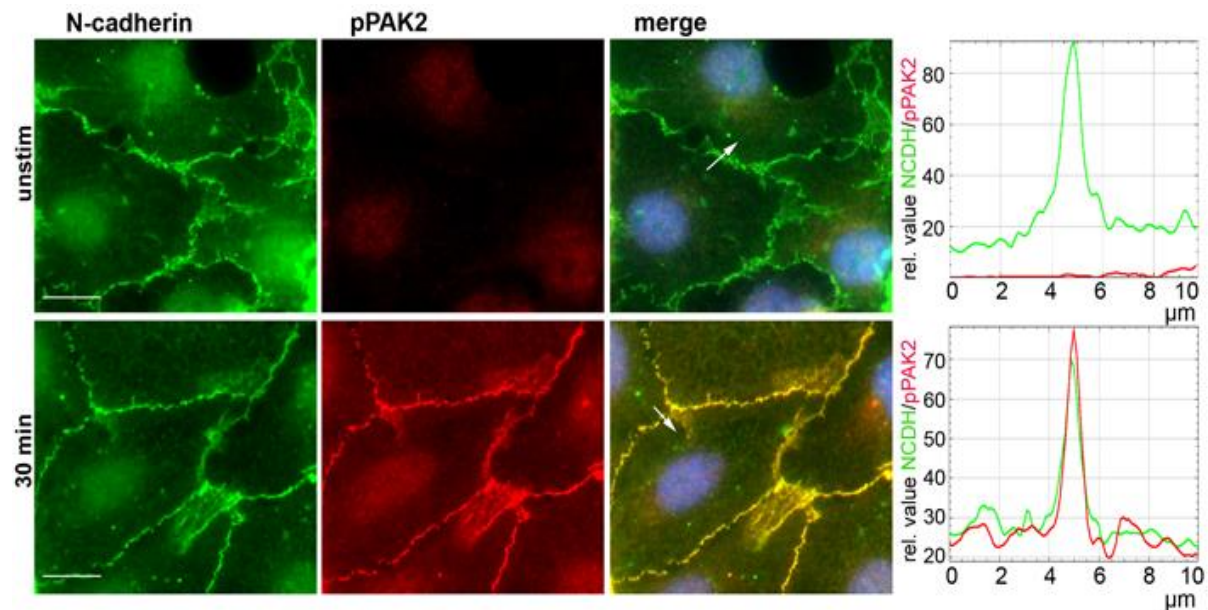
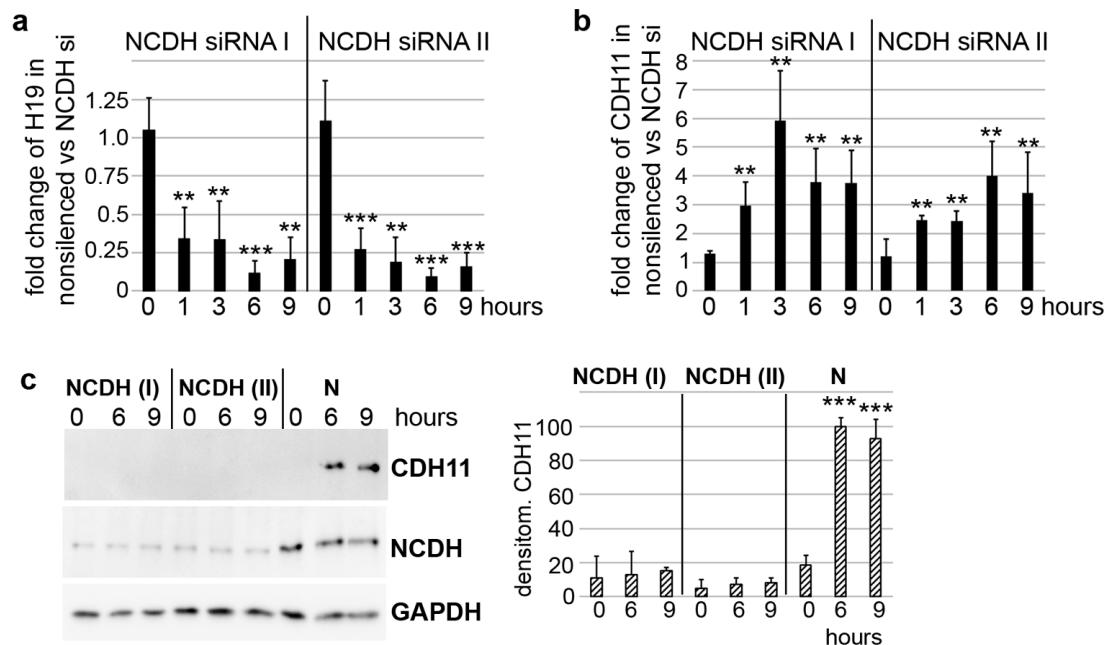


Supplementary Fig. 1



Suppl Fig. 1. Mechano-induced recruitment of pPAK2 to the cell membrane. RASFs grown on Bioflex plates and either unstimulated or strained for 30 min were fluorescently stained for NCDH and pPAK2. Adjacent to images: quantification of the pixel density of NCDH /pPAK2 along the white arrow. Cell nuclei were counterstained with DAPI. Objective 40x, scale bar = 10 μ m.

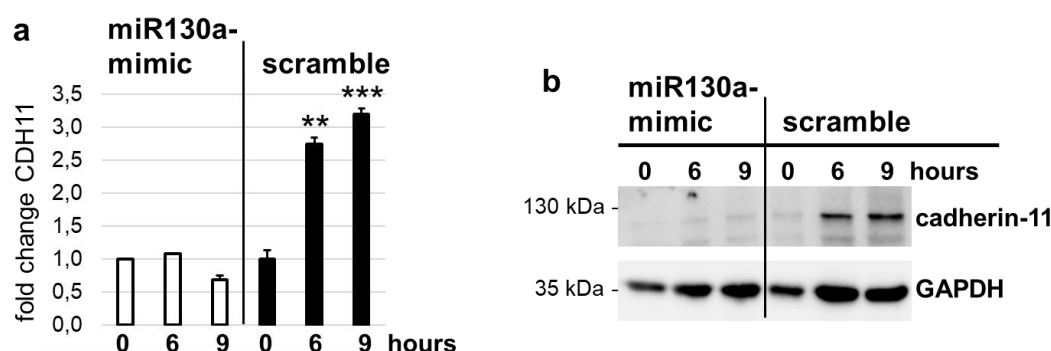
Supplementary Fig. 2



Supplementary Fig 2. LncRNA H19 and Cadherin-11, but not Cadherin-2 (NCDH) is a target of mechano-repressed NCDH. a-c RASFs silenced with NCDH siRNA (I), siRNA (II) or nonsilenced (N) were mechanically strained and a RT-qPCR for H19, and b RT-qPCR for

CDH11, fold changes from 5 different RASFs (mean $\pm$ SD) **c** immunoblots for CDH11 and NCDH, right panel, densitometry from 4 different RASFs. GAPDH served as loading control. ** $p < 0.005$, *** $p < 0.0005$, Student's t-test.

Supplementary Fig. 3



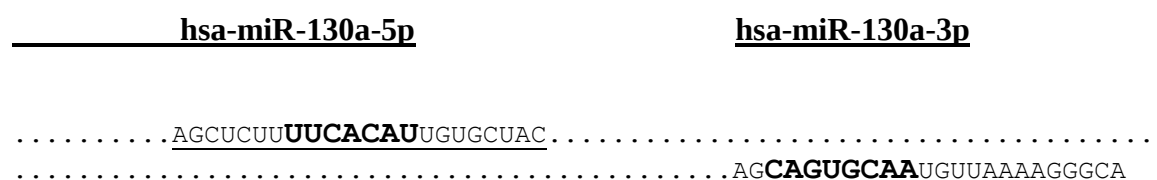
Supplementary Fig 3. Influence of miR-130a-5p on cadherin-11 expression. **A)** RT-qPCR for CDH11 from RASFs (mean $\pm$ SD from 3 donors) prior transfected with miR-130a-5p and scramble mimics and mechanically strained for 6 and 9 hours. **B)** immunoblots for CDH11 from RASFs prior transfected with miR-130a-5p and scramble mimics. Shown is a representative result from 3 independent experiments. GAPDH served as loading control. ** $p < 0.005$, *** $p < 0.0005$, Student's t-test.

Supplementary Fig. 4

a)

<https://www.mirbase.org>

Homo sapiens hsa-mir-130a precursor miRNA (89 nt)



Seed sequences are highlighted in bold.

Homo sapiens hsa-miR-130a-3p mature miRNA (MIMAT0000425)

miR-130a-3p seed: 3' **AACGUGA** 5'

hsa-mir-130a-3p 5' **CAGUGCAAUGUUAAAAGGGCAU** 3'

seed 5' **CAGUGCAA** 3'

 3' **AACGUGAC** 5'

 |||||

gene level 5' **TTGCACTG** 3'

Homo sapiens hsa-miR-130a-5p mature miRNA (MIMAT0004593)

 5' - GCUCUUUU**UCACAU**UGUGCUACU - 3'

 3' CGTGAA**AAGTGTA**ACACGATGA - 5'

gene level 5' **ATGTGAA** 3'

b)

https://www.ensembl.org/Homo_sapiens/Transcript/Exons?g=ENSG00000140937;r=16:64943753-65122063;t=ENST00000268603

>CDH11-201 utr3:protein_coding

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Supplementary Fig. 4. Alignment of miR-130a-3p and miR-130a-5p with 3' untranslated region (UTR) of cadherin-11. **a** Sequences for precursor and mature miR-130a from mirbase.org. **b** sequence of 3' UTR of cadherin-11 (www.ensembl.org). The seed sequences of miR-130a-3p (one 8-seed and two 6 seeds) are shown in **bold and underlined**. The alignment of the seed sequence of miR-130a-5p (*ATGTGAA; two 7-seeds*) is shown in italics and bold.