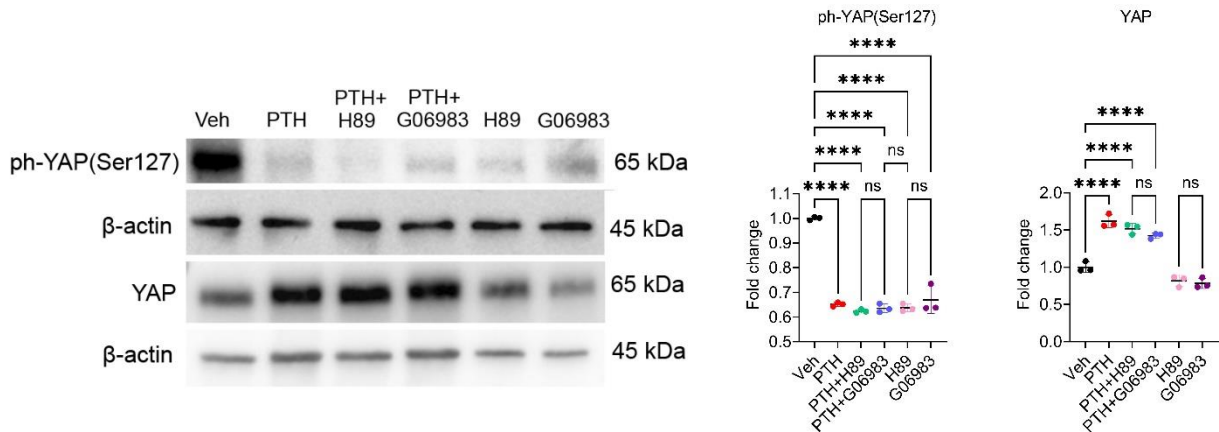


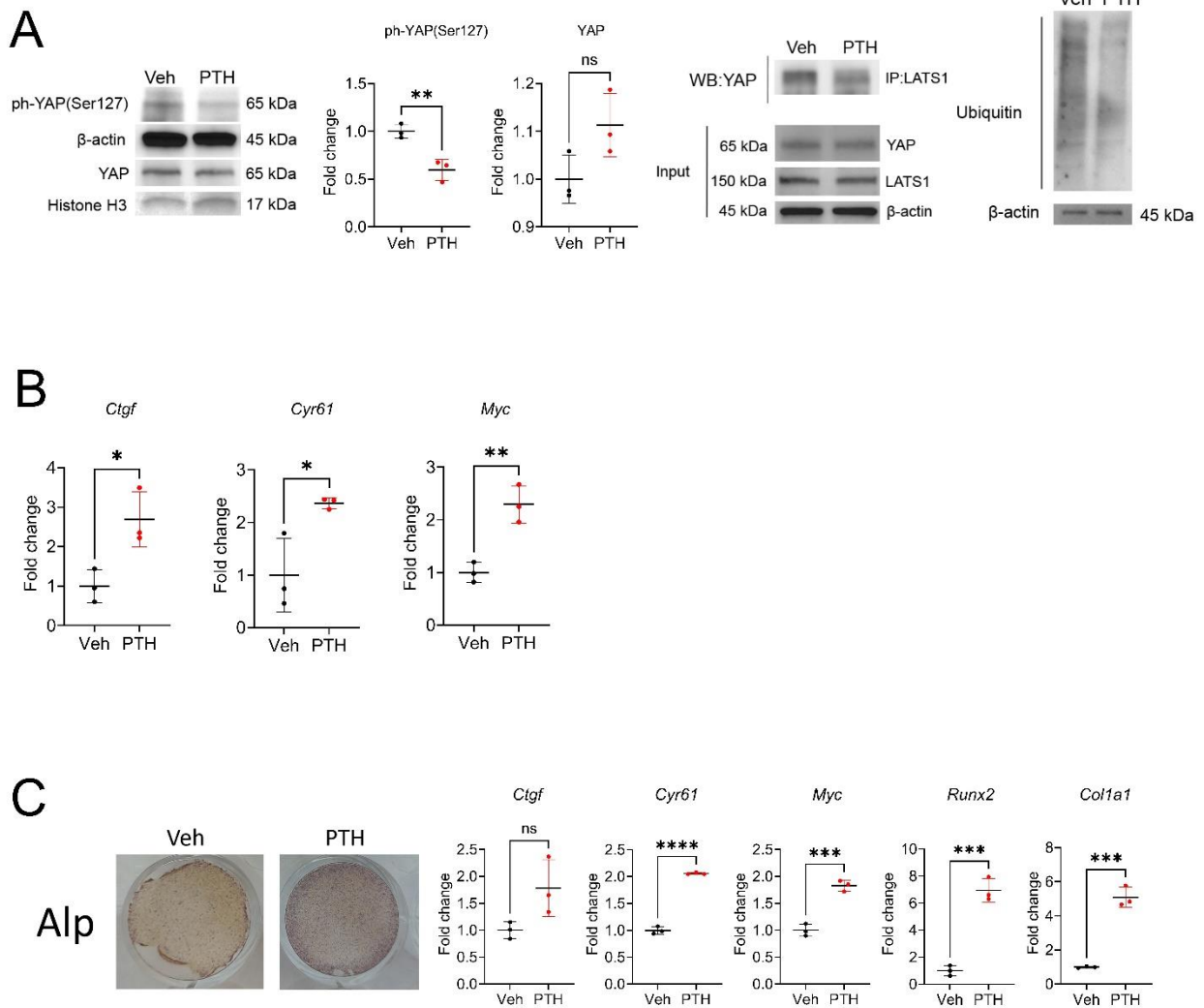
Supplementary figure 1



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Supplementary Figure 1. PKA and PKC pathways are not involved in PTH-dependent YAP stabilization
A. Western analysis representative blots and quantification of ph-YAP(S127) and with or without PTH (50 nM), H89 (10uM), G06983 (1uM), or the combination of the two W-20 cell line. Data are shown as the mean \pm SEM of 3 independent experiments. **** p <0.0001 by one-way ANOVA followed by Tukey test for multiple comparisons. The fold change is relative to the Veh.

Supplementary figure 2



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Supplementary Figure 2. PTH promotes YAP stability in W-20 YAP^{S381A} cells

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A. Western analysis representative blots and quantification of ph-YAP(S127) and YAP with or without PTH treatment. Representative blots of Co-IP of YAP with LATS1 and ubiquitin levels with or without PTH treatment.

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B. Expression of selected YAP target genes with or without PTH treatment in. **C** Representative image of Alp staining, expression of selected YAP target genes and expression of selected osteoblasts markers after OB differentiation with or without PTH treatment. Data are shown as the mean \pm SEM of 3 independent experiments. * $p < 0.05$, ** $p < 0.005$, *** $p < 0.0005$, **** $p < 0.0001$ by unpaired Student's t-test. The fold change is relative to the Veh.

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Panel B mean Ct values: Gene *Ctgf* Veh 25.65; PTH 23.45. Gene *Cyr61* Veh 21.87; PTH 20.11. Gene *Myc*

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Veh 27.70; PTH 27.85. Panel C mean Ct values: Gene *Ctgf* Veh 25.44; PTH 24.40. Gene *Cyr61* Veh 22.22;

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PTH 21.58. Gene *Myc* Veh 24.39; PTH 25.27. Gene *Runx2* Veh 26.97; PTH 24.34. Gene *Col1a1* Veh 21.18;

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PTH 19.59.

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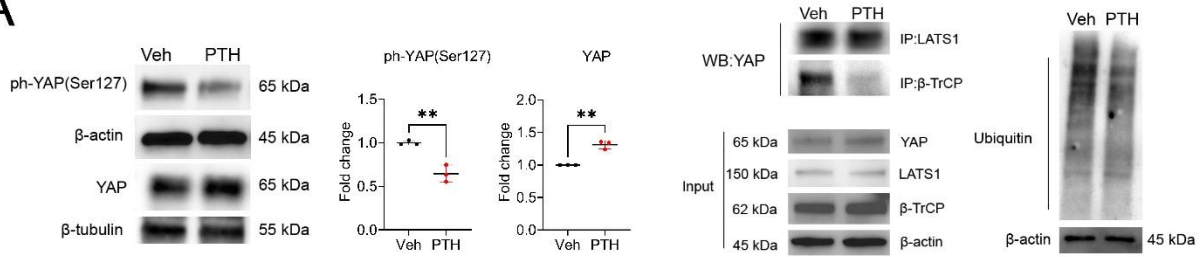
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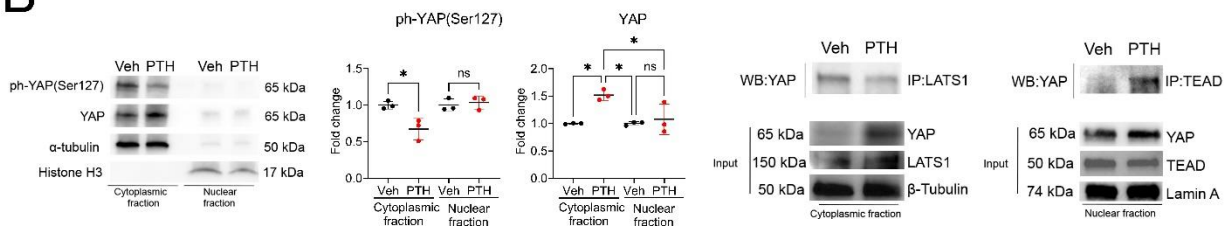
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Supplementary figure 3

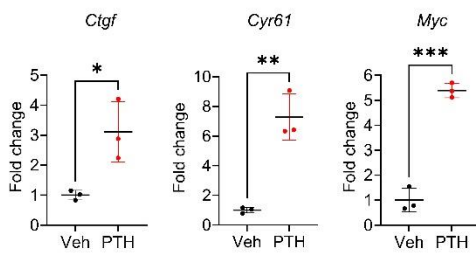
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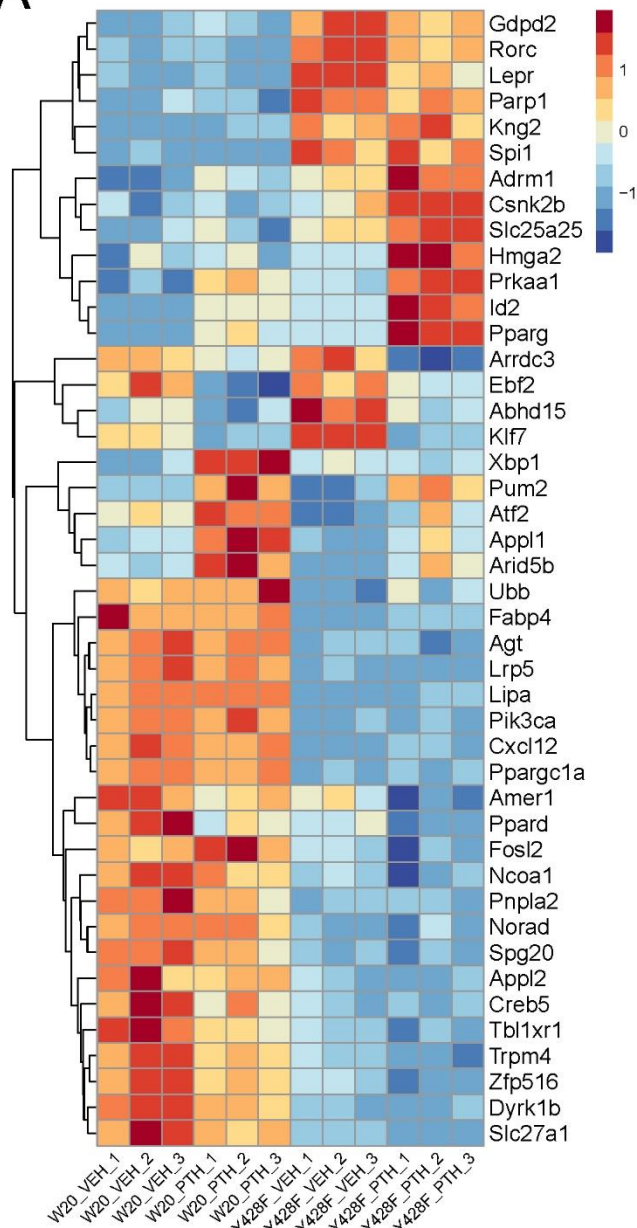
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950 **Supplementary Figure 3. PTH promotes YAP stability in YAP^{S381A/Y375F} cells**

951 **A.** Western analysis representative blots and quantification of ph-YAP(S127) and YAP with or without PTH
952 treatment; representative blots of Co-IP of YAP with LATS1 and β -TrCP and ubiquitin levels with or without
953 PTH treatment. **B.** Western analysis representative blots and quantification of ph-YAP(S127) and YAP protein
954 levels in the cytoplasmic and nuclear fraction with or without PTH treatment and representative blots of Co-IP
955 of YAP with LATS1 in the cytoplasmic fraction and TEAD in the nuclear fraction. **C.** Expression of selected
956 YAP target genes with or without PTH treatment after OB differentiation. Data are shown as the mean \pm SEM
957 of 3 independent experiments. * $p < 0.05$, ** $p < 0.005$, *** $p < 0.0005$, by unpaired Student's t-test. The fold change
958 is relative to the Veh.

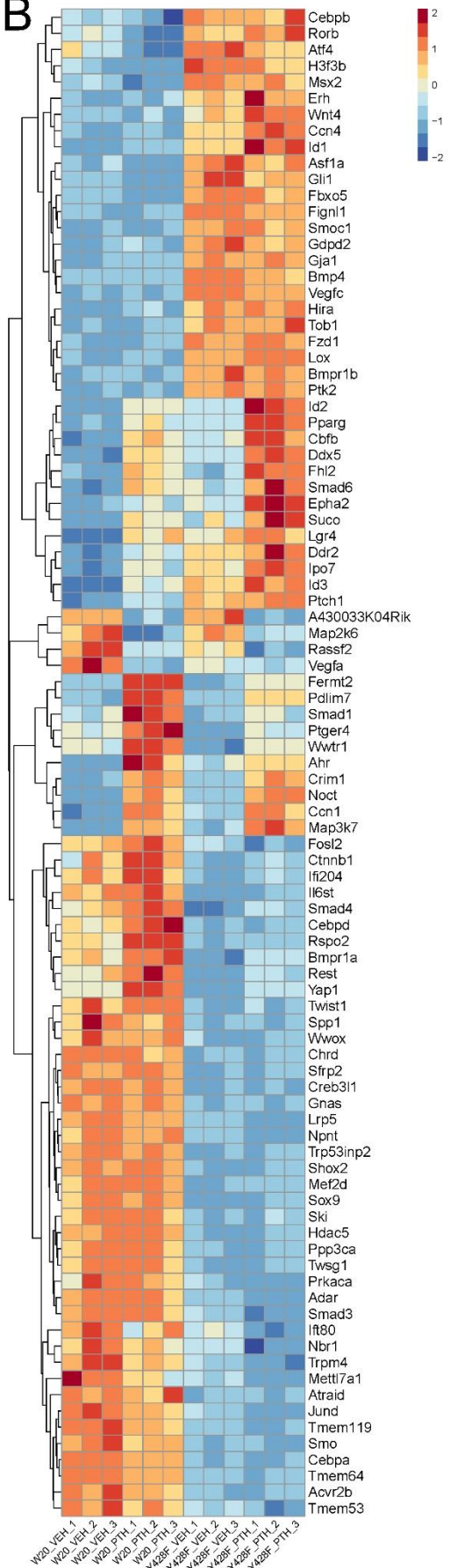
959 Panel C mean Ct values: Gene *Ctgf* Veh 27.16; PTH 25.22. Gene *Cyr61* Veh 23.93; PTH 21.71. Gene *Myc*
960 Veh 22.10; PTH 22.06.

Supplementary figure 4

A



B



962 **Supplementary Figure 4. PTH differently regulates adipocytes and osteoblast-related genes in W-20**
 963 **and YAP^{Y428F} cells**

964 **A.** Heatmap of significantly differentially regulated adipocyte-related genes by PTH in W-20 and in YAP^{Y428F}
 965 cells. **B.** Heatmap of significantly differentially regulated osteoblast-related genes by PTH in W0 and in Yap^{Y428F}
 966 cells.
 967

968 **Supplementary table 1**

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Cell Proliferation (O.D. ± SEM)

Time	Ctr	YAP WT	YAP ^{S381A}	YAP ^{S381A/Y375F}	YAP ^{S381A/Y428F}
0h	0,3452 ± 0,0380	0,2754 ± 0,0411	0,3389 ± 0,0513	0,2476 ± 0,0359	0,2967 ± 0,0120
24h	0,4187 ± 0,0202	0,3010 ± 0,0505	0,3792 ± 0,0691	0,2802 ± 0,0729	0,4050 ± 0,0338
48h	0,8033 ± 0,0999	0,7504 ± 0,1752	1,0452 ± 0,2792	0,6207 ± 0,2317	1,0662 ± 0,0286
72h	0,9096 ± 0,0745	0,9142 ± 0,2085	1,1881 ± 0,2808	0,6837 ± 0,2613	1,1118 ± 0,0124
96h	1,2918 ± 0,0992	1,6773 ± 0,1190	1,7981 ± 0,1802	1,3606 ± 0,2613	1,7246 ± 0,0124

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Multiple comparisons test	Interaction	Adjusted P value
Ctr vs. YAP WT	ns	>0,9999
Ctr vs. YAP ^{S381A}	ns	0,9752
Ctr vs. YAP ^{S381A/Y375F}	ns	0,9967
Ctr vs. YAP ^{S381A/Y428F}	ns	0,9863
YAP WT vs. YAP ^{S381A}	ns	0,9865
YAP WT vs. YAP ^{S381A/Y375F}	ns	0,9919
YAP WT vs. YAP ^{S381A/Y428F}	ns	0,9935
YAP ^{S381A} vs. YAP ^{S381A/Y375F}	ns	0,8801
YAP ^{S381A} vs. YAP ^{S381A/Y428F}	ns	>0,9999
YAP ^{S381A/Y375F} vs. YAP ^{S381A/Y428F}	ns	0,9124

980 **Supplementary Table 1. YAP mutations do not affect cell proliferation.**

981 CCK-8MTT cell proliferation assay of in W-20 control, YAP WT, YAP^{S381A}, YAP^{S381A/375F} and YAP^{S381A/Y428F} cells
 982 after indicated time points. ± represent standard error.