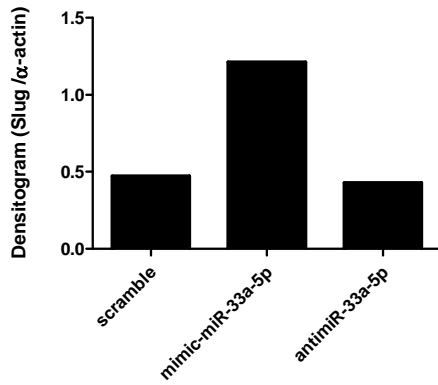
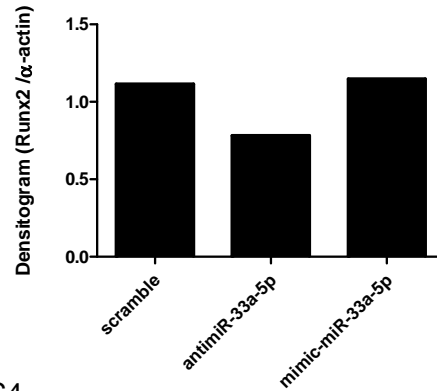


Supplementary figures

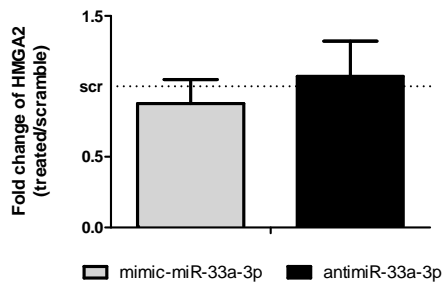
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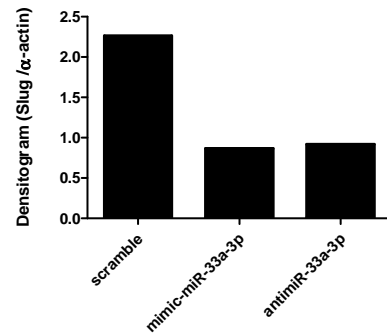
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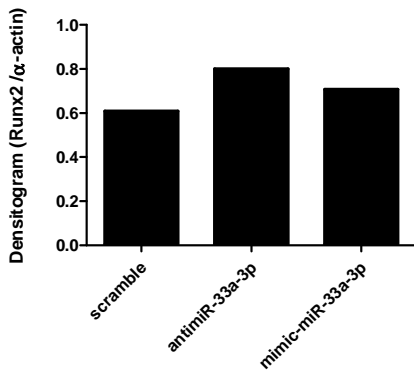
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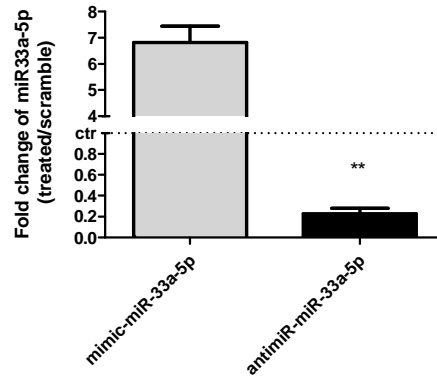
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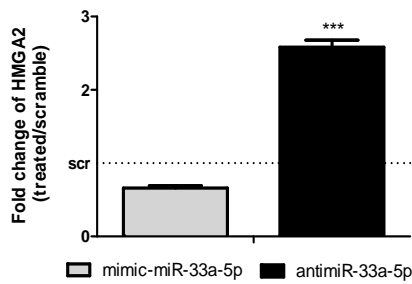
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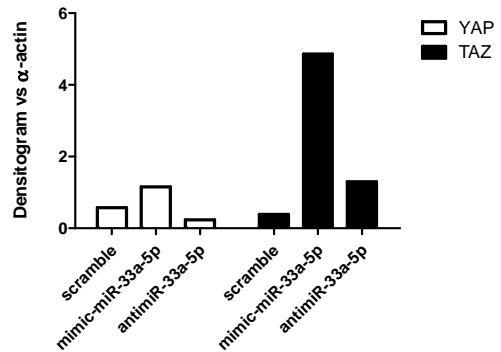
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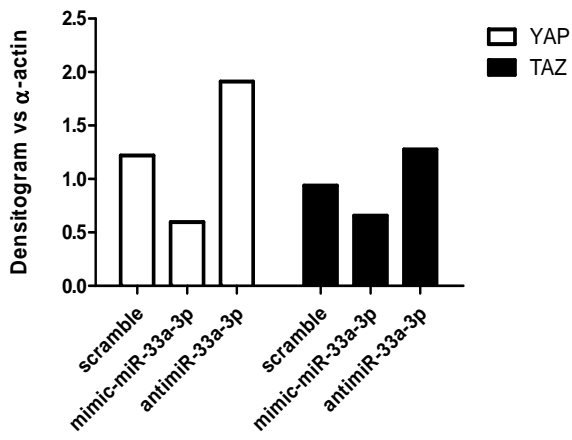
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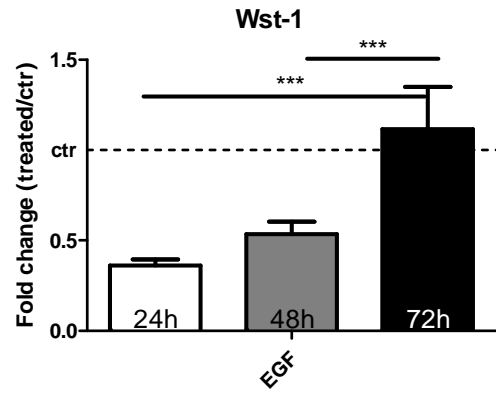
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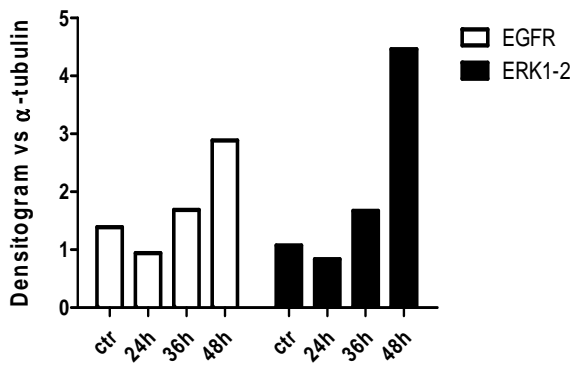
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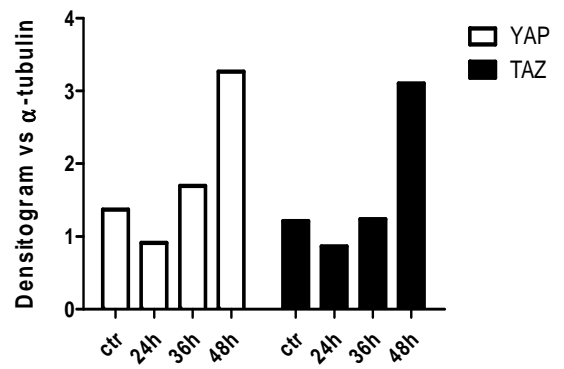
S10



S11



S12



## Supplementary Figures Legend

**S1:** Densitogram analysis of Slug expression versus  $\alpha$ -actin in hMSCs after 24h of transfection with: scramble, mimic-miR-33a-5p and antimiR-33a-5p.

**S2:** Densitogram analysis of Runx2 expression versus  $\alpha$ -actin in hMSCs after 24h of transfection with: scramble, mimic-miR-33a-5p and antimiR-33a-5p.

**S3:** hMSCs after 24h of transfection with: scramble, mimic-miR-33a-3p and antimiR-miR-33a-3p were analyzed for the HMGA-2, miR-33a-5p target, expression by qRT-PCR. Quantitative RT-PCR data are expressed as fold of change (FOI) in gene expression ( $2^{-\Delta\Delta Ct}$ ) occurred in mimic or antimiR vs scramble groups. Student t test: \*,  $p < 0.05$ , \*\*,  $p < 0.005$ , \*\*\*,  $p < 0.0005$  between experimental group.

**S4:** Densitogram analysis of Slug expression versus  $\alpha$ -actin in hMSCs after 24h of transfection with: scramble, mimic-miR-33a-3p and antimiR-33a-3p.

**S5:** Densitogram analysis of Runx2 expression versus  $\alpha$ -actin in hMSCs after 24h of transfection with: scramble, mimic-miR-33a-3p and antimiR-33a-3p.

**S6:** Quantitative RT-PCR was performed to evaluate the efficiency of transfection on pre-osteoblast cells (hMSCs maintained in OM medium), after 24h of transfection with: scramble, mimic-miR-33a-5p and antimiR-miR-33a-5p. Quantitative RT-PCR data are expressed as fold of change (FOI) in gene expression ( $2^{-\Delta\Delta Ct}$ ) occurred in mimic or antimiR vs scramble groups. Student t test: \*,  $p < 0.05$ , \*\*,  $p < 0.005$ , \*\*\*,  $p < 0.0005$  between experimental group.

**S7:** Study of miR-33a-5p-targets by gain and loss function assays on hMSCs maintained in OM after 24h of transfection with specific mimic and antimiR. It is analyzed the HMGA-2, miR-33a-5p target, expression by qRT-PCR and data are expressed as fold of change (FOI) in gene expression ( $2^{-\Delta\Delta Ct}$ ) occurred in mimic or antimiR vs scramble groups. Student t test: \*,  $p < 0.05$ , \*\*,  $p < 0.005$ , \*\*\*,  $p < 0.0005$  between experimental group.

**S8:** Densitogram analysis of YAP and TAZ expression versus  $\alpha$ -actin in hMSCs after 24h of transfection with: scramble, mimic-miR-33a-5p and antimiR-33a-5p.

**S9:** Densitogram analysis of YAP and TAZ expression versus  $\alpha$ -actin in hMSCs after 24h of transfection with: scramble, mimic-miR-33a-3p and antimiR-33a-3p.

**S10:** WST-1 assay performed on hMSCs treated with EGF for 24h, 36h and 48h. Data acquired as A540nm and are represented as fold of change compared vs control cells.

**S11:** Densitogram analysis of EGF and ERK1-2 expression versus  $\alpha$ -tubulin in hMSCs after 24h, 36h and 48h of EGF treatments.

**S12:** Densitogram analysis of YAP and TAZ expression versus  $\alpha$ -tubulin in hMSCs after 24h, 36h and 48h of EGF treatments.