Researchers find HERC1 protein deficiency causes osteopenia

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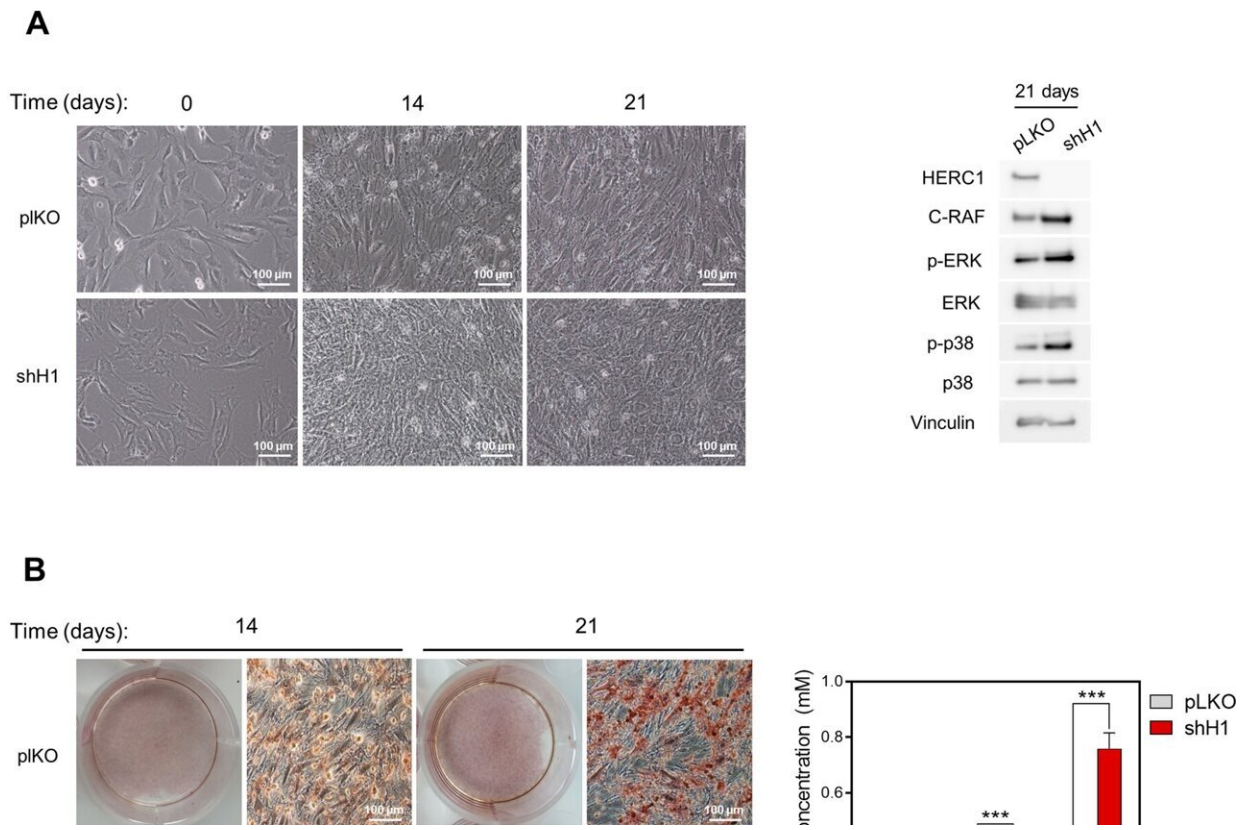

HERC1 regulates the osteoblastic differentiation. Bone marrow derived MSCs were infected with lentiviral particles carrying either the empty plKO vector as a negative control (plKO) or an shRNA against HERC1 (shH1) and were further treated with an osteoblastic differentiation medium. A Representative images of differentiation process at 0, 14, and 21 days. Lysates were analyzed by immunoblotting, using specific antibodies against the indicated proteins. B Alizarin Red staining. Representative images were acquired by optical microscopy at the times indicated. Quantification is shown (n = 5). C

Osteoblastic gene expression of MSCs undergoing differentiation at the times indicated. The mRNA expression levels were measured by RT-qPCR and normalized to Tbp expression (n = 4). D Cells were fixed and stained for alkaline phosphatase activity. Representative images are shown. Data are expressed as mean ± SEM. Significant differences: *p