## Supplementary Figure S10-S13 and the Relative Legends



**Supplementary Figure S10.** Re-introduction of the miR-29 members into BM CD34+ cells derived from an AML M5 patient can partially overcome monocytic differentiation arrest. BM CD34+ cells from an AML patient (#11) who was diagnosed as FAB M5 were infected with lenti\_29a, lenti\_29b, lenti\_29c and lenti\_con respectively, and induced to monocytic differentiation after infection for 24 h. Cells were obtained at the indicated times and the GFP-positive cells were collected for analysis. (a) Expression level of CD14 was analyzed by FACS. (b) May-Grünwald-Giemsa staining for detecting the cells at different stages of monocytic differentiation. (c) Statistic analysis of cell numbers at different differentiation stages at day 5 from the differentiation induction was shown. Mob: monoblasts; PMo: promonocytes; Mo: monocytes; Ma: macrophage.



**Supplementary Figure S11.** Histological analysis in mouse spleens by H&E. Spleen sections obtained from the mice with different treatments were analyzed for the degree of engraftment by H&E staining. Untreated mice, n=2; mice treated with lenti\_con (n=5), lenti\_29a (n=5), lenti\_29b (n=5) and lenti\_29c (n=5). Scare bar: 50 µm.



**Supplementary Figure S12.** Immnohistochemical analysis of the expression level of Ki67 in mice spleens. Spleen sections obtained from the mice with different treatments were analyzed for cell proliferation by Ki67 staining. Untreated mice, n=2; mice treated with lenti\_con (n=5), lenti\_29a (n=5), lenti\_29b (n=5) and lenti\_29c (n=5). Scare bar: 20  $\mu$ m.



Supplementary Figure S13. Immnohistochemical analysis of the expression level of caspase-3 in mice spleens. Spleen sections obtained from the mice with different treatment were analyzed for cell apoptosis by detection of the level of caspase-3. Untreated mice, n=2; mice treated with lenti\_con (n=5), lenti\_29a (n=5), lenti\_29b (n=5) and lenti\_29c (n=5). Scare bar: 20  $\mu$ m.