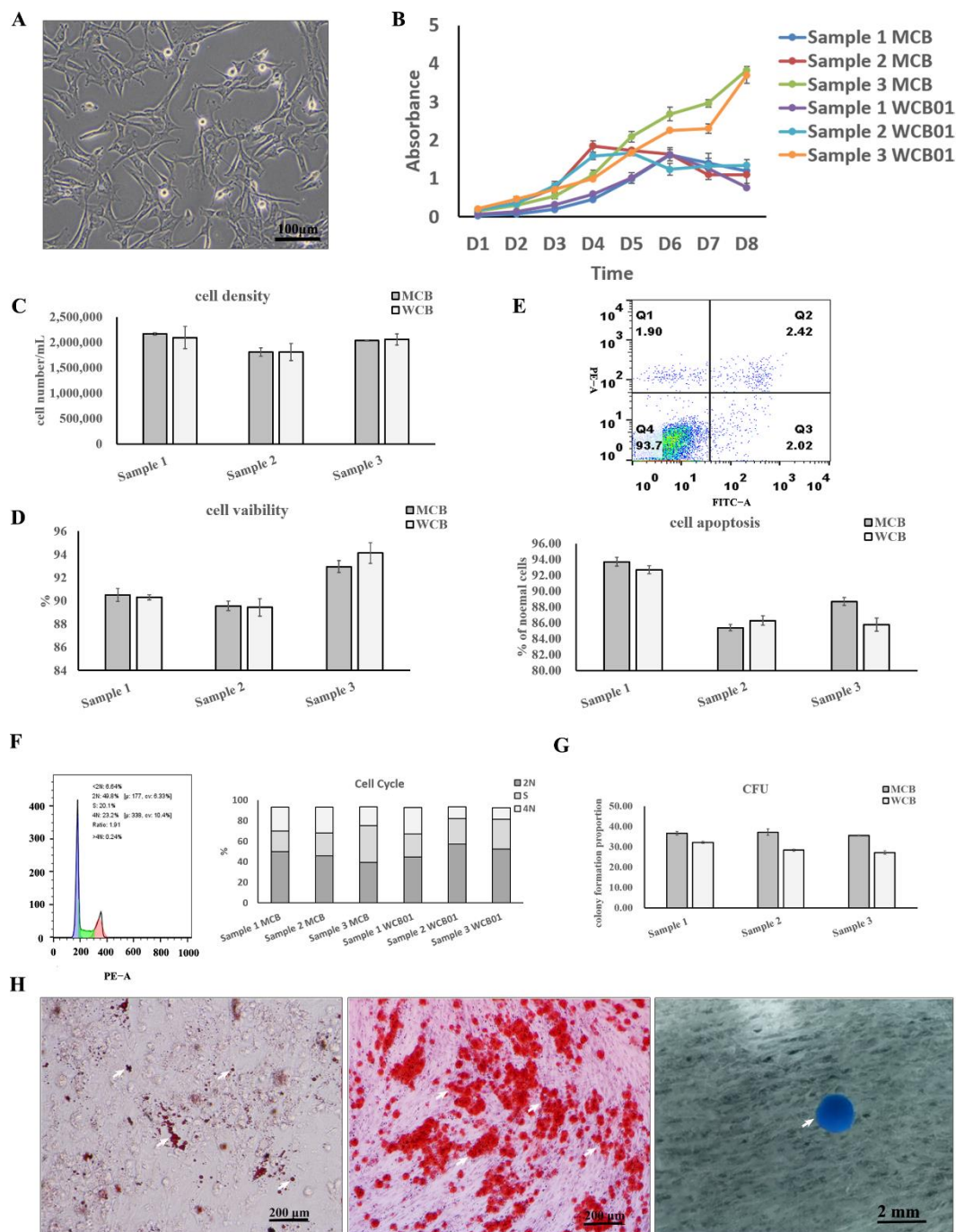
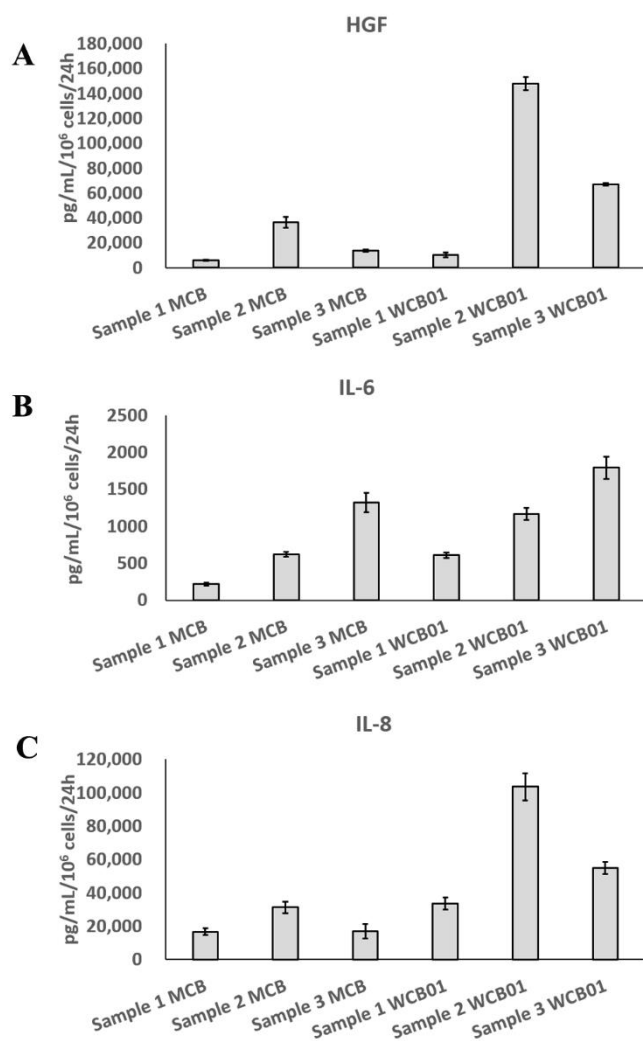


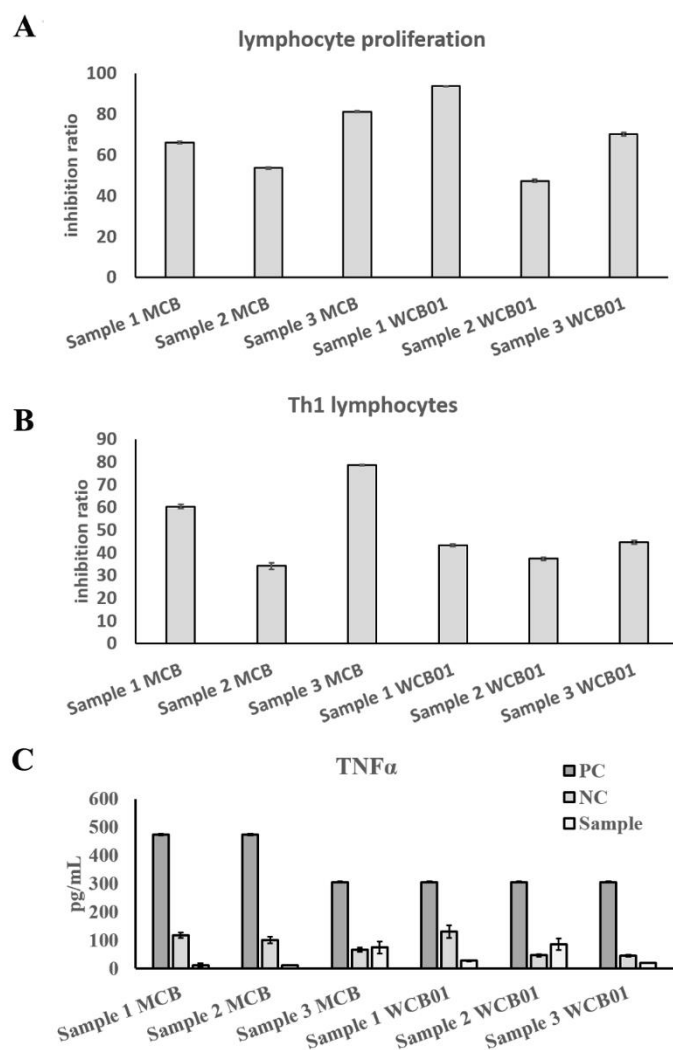
# Supplementary Material



**Figure S1.** Cell characteristic test of the MCBs and WCBs. **(A)** Cell morphology of HUC-MSCs. **(B)** Cell growth curve of the MCBs and WCBs. **(C)** Cell density of the MCBs and WCBs. **(D)** Cell viability of the MCBs and WCBs. **(E)** Cell apoptosis of MCBs and WCBs. **(F)** Cell cycle of the MCBs and WCBs. **(G)** Colony formation proportions of the MCB and WCBs. **(H)** Representative results of induced adipogenic, osteogenic and chondrogenic differentiation of the MCBs and WCBs.



**Figure S2.** Growth factor detection of the MCBs and WCBs. (A) HGF. (B) IL-6. (C) IL-8.



**Figure S3.** Immune modulating function test of the MCBs and WCBs. (A) Detection of lymphocyte proliferation inhibition ability of the MCBs and WCBs. (B) Detection of Th1 lymphocyte inhibition ability of the MCBs and WCBs. (C) Detection of lymphocyte TNF $\alpha$  secretion inhibition ability of the MCBs and WCBs.