

## Supplementary Data

# Glycemic Control by Umbilical Cord-Derived Mesenchymal Stem Cells Promotes Effects of Fasting-Mimicking Diet on Type 2 Diabetes

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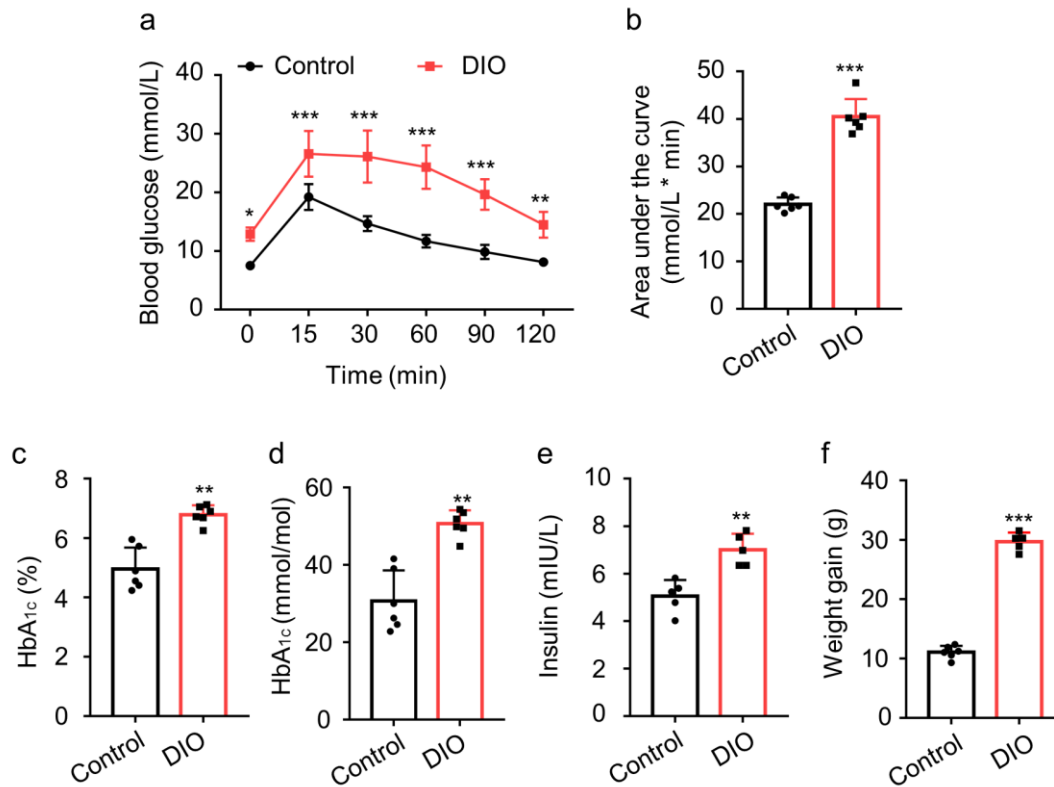
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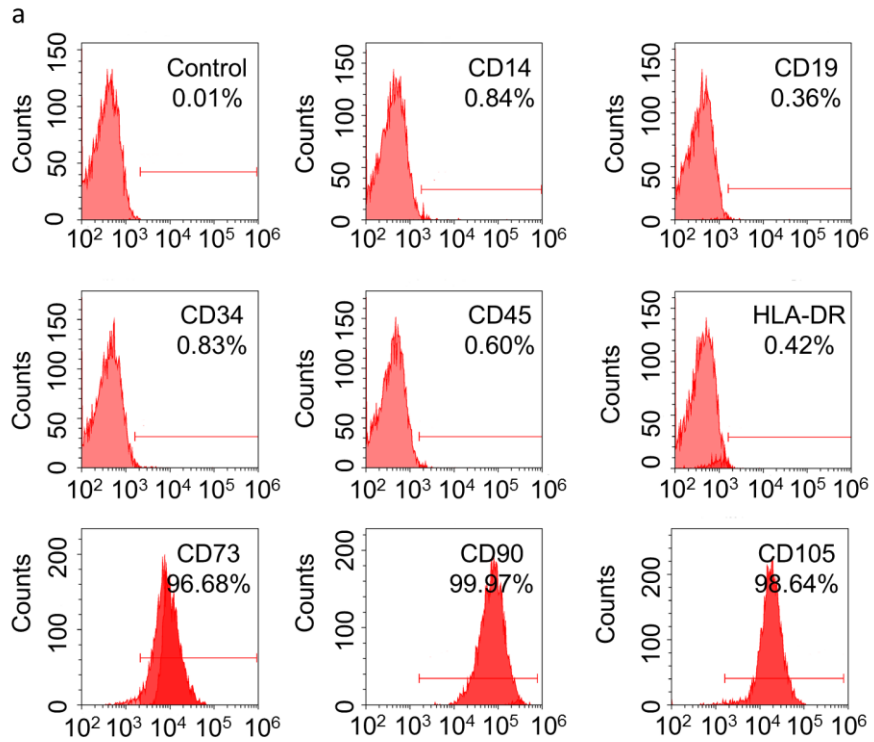
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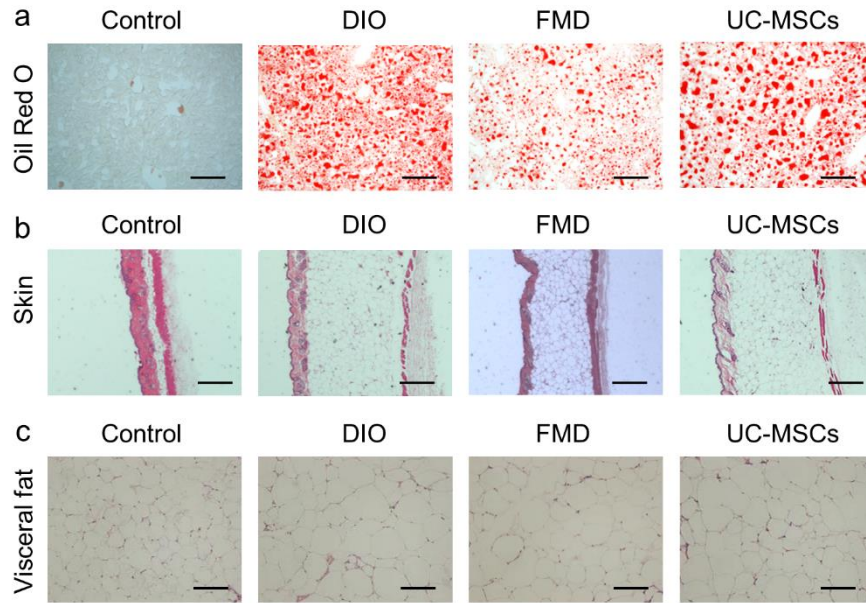
† Na Zhao, Ying-Feng Gao and Lei Bao contributed equally to this work.



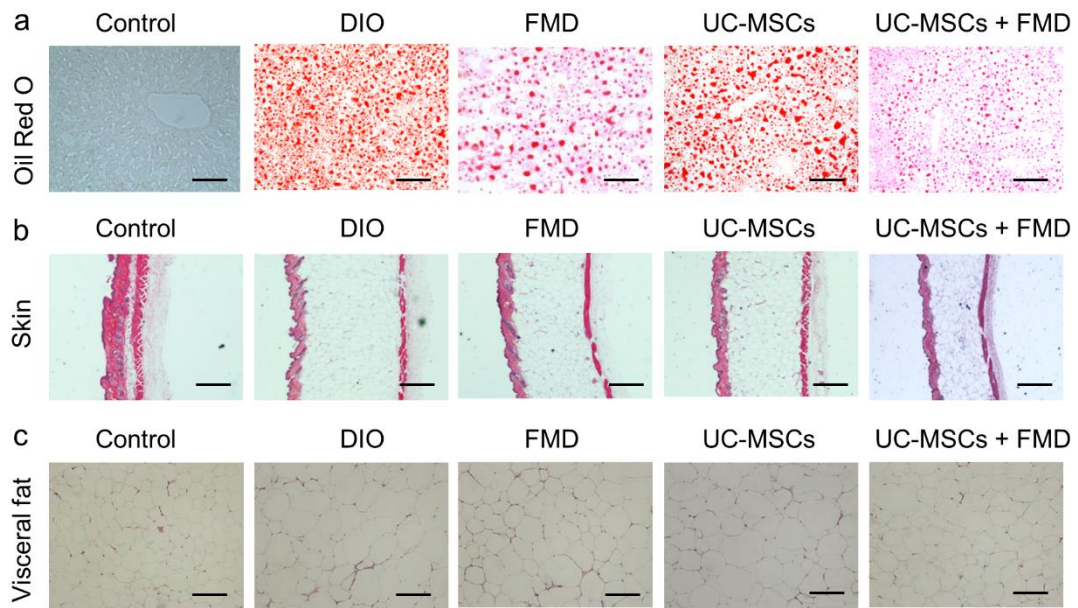
**Figure S1. Glucose homeostasis in control and DIO mice.** (a, b): Glucose tolerance was assessed by IPGTT. AUC above baseline was calculated as an index of glucose tolerance. (c-e): ELISA analyzed the levels of HbA<sub>1c</sub>, Hb and serum insulin. (f): weight gain after 16 weeks of HFD. The data are expressed as mean values  $\pm$  SD. n=6 mice per group. \*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001.



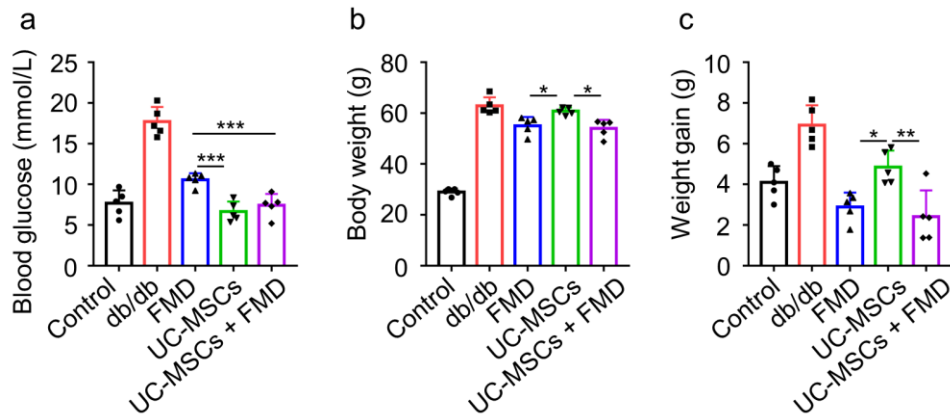
**Figure S2. The identification of UC-MSCs.** (a): Flow Cytometry results determining the UC-MSCs phenotype. UC-MSCs were stained with FITC-labeled CD14, CD19, CD73, HLA-DR and PE-labeled, CD34, CD45, CD90, CD105.



**Figure S3. Histomorphological changes of liver, skin and visceral fat.** (a): Liver steatosis were analyzed through staining with Oil Red O (Scale bar, 200  $\mu$ m). (b): H&E staining of skin (Scale bar, 1 mm). (c): H&E staining of visceral fat (Scale bar, 100  $\mu$ m).



**Figure S4. Histomorphological changes of liver, skin and visceral fat.** (a): Liver steatosis were analyzed through staining with Oil Red O (Scale bar, 200  $\mu$ m). (b): H&E staining of skin (Scale bar, 1 mm). (c): H&E staining of visceral fat (Scale bar, 100  $\mu$ m).



**Figure S5. The effect of UC-MSCs combined with FMD on blood glucose and body weight in db/db mice.** (a-c): Blood glucose and body weight were determined after fasting 6h at sacrificed. The data are expressed as mean values  $\pm$  SD. n=6 mice per group. \*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001.