Bone marrow-derived mesenchymal stem cells enhance autophagy via PI3K/AKT signalling to reduce the severity of ischemia/reperfusion-induced lung injury

Jing Li, M.D. ^{1,2#}; Jian Zhou, M.D., Ph.D. ^{1,2#}; Dan Zhang, M.D. ^{1,2}; Yuanlin Song, M.D., Ph.D. ^{1,2}; Jun She, M.D., Ph.D. ^{1,2*}; Chunxue Bai, M.D., Ph.D., FCCP ^{1,2*}

Affiliation: 1 Department of Pulmonary Medicine, Zhongshan Hospital, Fudan University, Shanghai, China; 2 Shanghai Respiratory Research Institute, Shanghai, China.

*Please address correspondence to:

Chunxue Bai, M.D., Ph.D.

Department of Pulmonary Medicine, Zhongshan Hospital, Fudan University, Shanghai, China; Shanghai Respiratory Research Institute, Shanghai, China;

No.180, Fenglin Road, Xuhui District, Shanghai, 200032, People's Republic of China

Tel: +86-21-64041990-3077

E-mail: bai.chunxue@zs-hospital.sh.cn

Jun She, M.D., Ph.D.

Department of Pulmonary Medicine, Zhongshan Hospital, Fudan University, Shanghai, China; Shanghai Respiratory Research Institute, Shanghai, China;

No.180, Fenglin Road, Xuhui District, Shanghai, 200032, People's Republic of China

E-mail: shejuncn@aliyun.com

[#] These authors share co-first authorship.

Running Title: Bone marrow-derived mesenchymal stem cells enhance autophagy to reduce the severity of acute lung injury

Supplementary Materials and Methods

Cell labelling

BM-MSCs were labelled using a PKH26 Fluorescent Cell Linker Kit (Sigma) according to the manufacturer's instructions, resuspended in PBS at a density of 5×10^6 cells/ ml and then kept on ice prior to transplantation.

Supplementary figure legends

Figure 1.

Engraftment of BM-MSCs in lung tissues. Engrafted BM-MSCs stained with PKH26 (red) were detected three and a half hours after cell injection. The samples were stained using 6-diamino-2-phenylindole (DAPI) (blue).