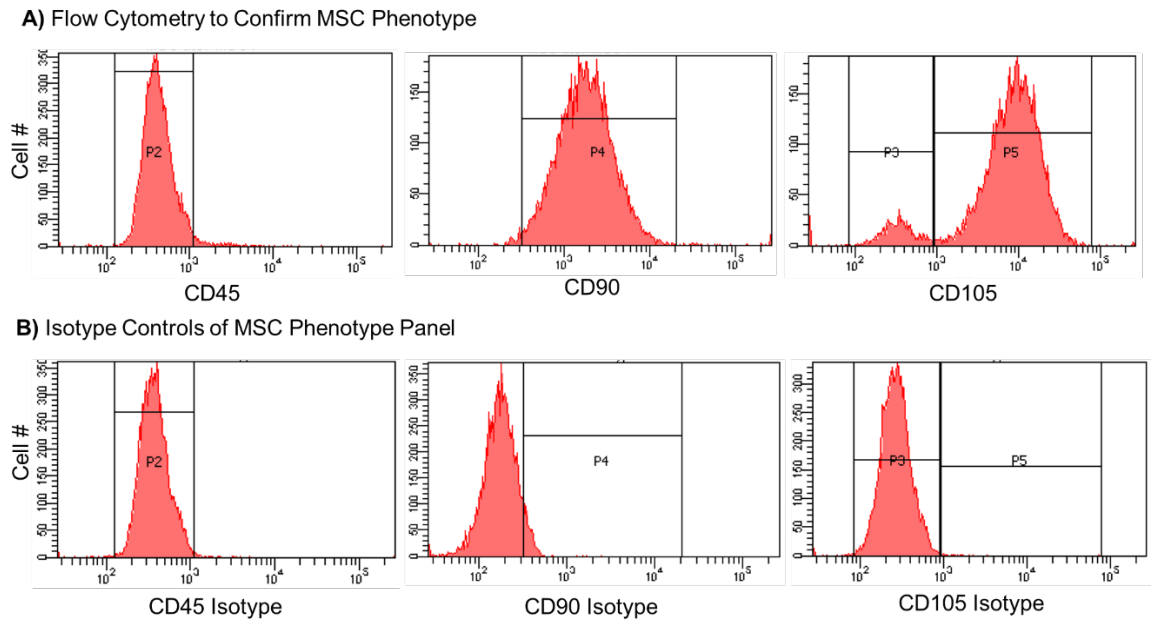
Supplemental Methods:

Table 1. Primers used for qRT-PCR.

Gene ID	Accession Number	Forward Primer	Reverse Primer
NDUFB8	NM_001106360.2	GAGCCGTACCCAGATGATGG	CTTTGGAAGGATCACCGCCT
SDHB	NM_001100539.1	GCCATGAACATCAACGGAGG	GCAGATACTGTTGCTTGCCC
UQCRC2	NM_001006970.1	GACCGTAGGAAAGGGCAACT	TGGGGCAACTTTGAGGGAAT
mt-Co1 (COX1)	KP993068.1	TCACAGCCCATGCATTCGTA	GCTAGGTTTCCGGCTAAGGG
ATP5F1A	NM_023093.1	TCCAAGCAGGCTGTTGCTTA	AGCAGGCGAGAGTGTAGGTA

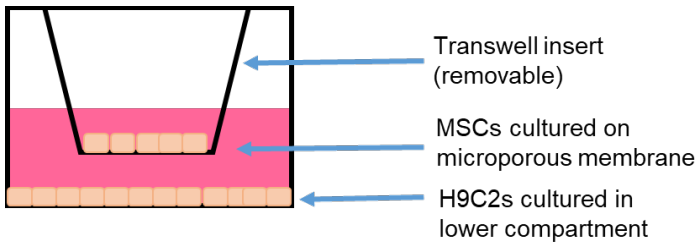
Supplemental Figure 1. Confirmation of MSC Phenotype by Flow Cytometry

Following isolation from bone marrow and culture to passage 3, swine MSC phenotype was confirmed by flow cytometry by staining for CD45 negative (eBiosciences #11-9459), CD90 positive (BD Biosciences, #BD559869), and CD105 positive (Abcam #ab53321).



Supplemental Figure 2. Transwell co-culture of MSCs and H9C2 cells.

All co-culture experiments were conducted using a transwell co-culture system consisting of a removable insert with a microporous membrane, preventing direct cell-cell contact but allowing paracrine signaling between cell types. Prior to measurement of mitochondrial respiration in H9C2 cells, the transwell insert containing MSCs was removed.


Transwell insert
(removable)
MSCs cultured on
microporous membrane
H9C2s cultured in
lower compartment