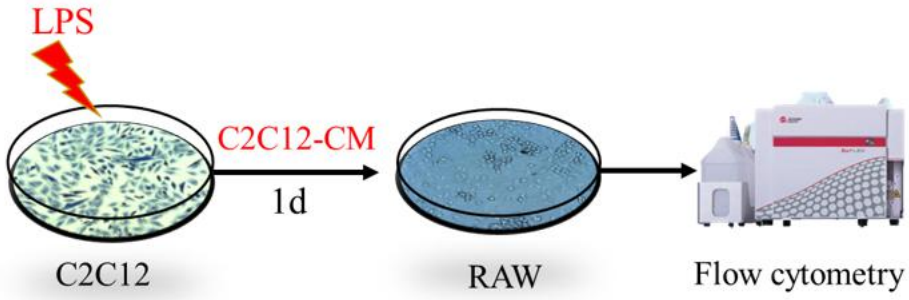
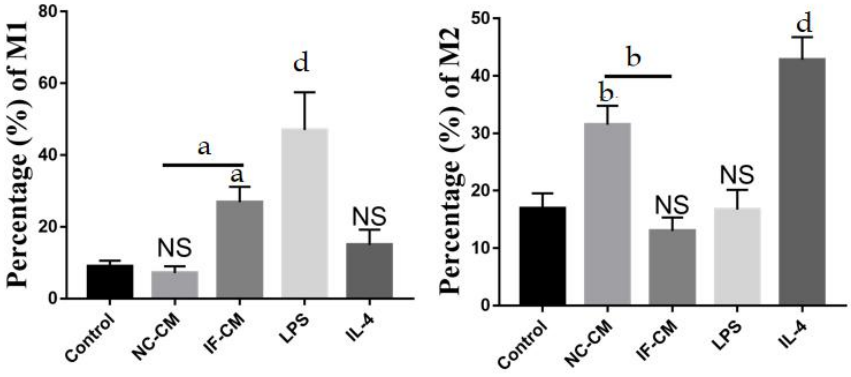
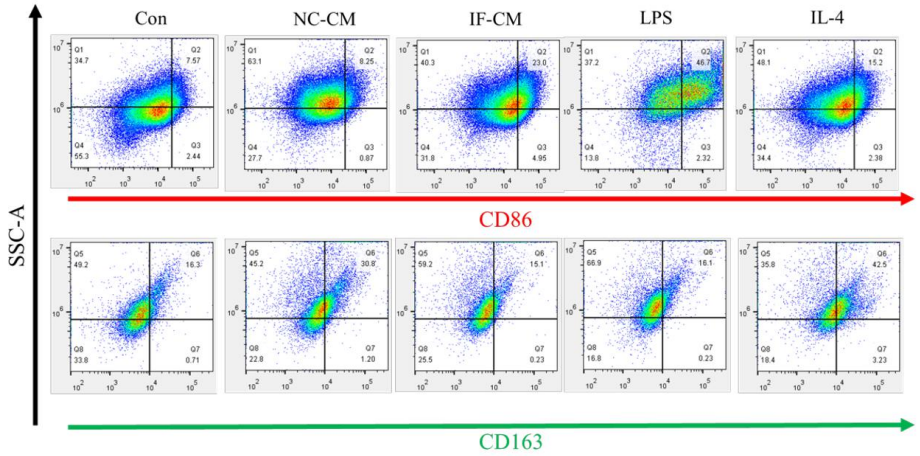
A


LPS
C2C12-CM
1d
C2C12
RAW
Flow cytometry

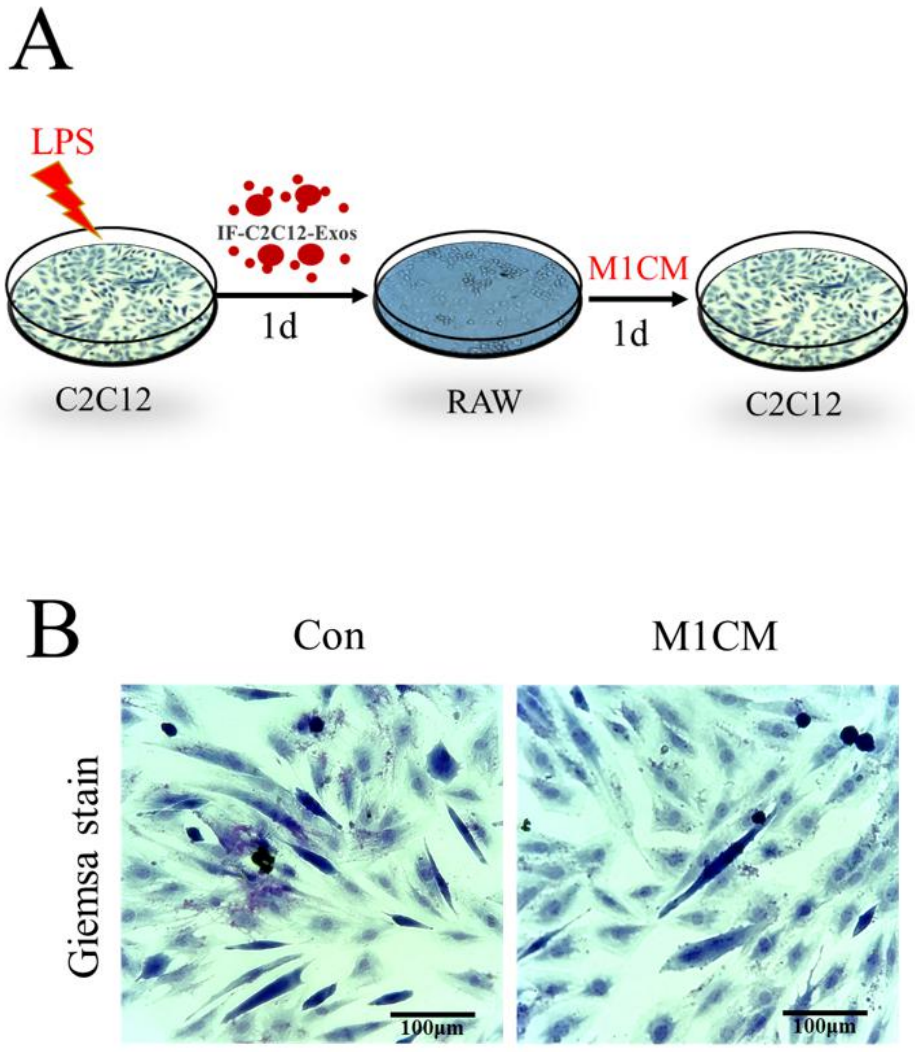
B


Percentage (%) of M1
80
60
40
20
0
a
a
d
NS
NS
Control
NC-CM
IF-CM
LPS
IL-4
Percentage (%) of M2
50
40
30
20
10
0
b
b
d
NS
NS
Control
NC-CM
IF-CM
LPS
IL-4

C


Con
NC-CM
IF-CM
LPS
IL-4
SSC-A
CD86
CD163

Supplementary Figure 1 IF-C2C12-CM induced M1 macrophage polarization in vitro. A: Flow chart showed that IF-C2C12-CM was added to the RAW culture medium for 24 h. Then the macrophages were collected to perform flow cytometry tests; B: Quantification of flow cytometry data (n = 3). Data are presented as mean ± SD. $^{a}P < 0.05$; $^{b}P < 0.01$; $^{c}P < 0.001$; $^{d}P < 0.0001$; C: Representative flow cytometry plots showing the percentages of M1 (CD86 +) and M2 (CD163 +) phenotype in macrophages after culturing with conditioned medium from inflammatory myoblast, normal conditioned medium from myoblast, 500 ng/mL, Lipopolysaccharide, 20 ng/mL interleukin-4 for 24 h. IF-CM: Conditioned medium from inflammatory myoblast; NC-CM: Normal conditioned medium from myoblast; NS: Not significant; LPS: Lipopolysaccharide; IL: Interleukin.



Supplementary Figure 2 M1CM impaired C2C12 muscle differentiation. A: Flow chart showed that IF-C2C12 stimulated macrophages towards M1 subtypes for two

days. Then the fresh medium was added to macrophages and collected the conditioned medium after 24 h to treat normal C2C12; B: Representative images of myotube after culturing with M1CM for 24 h by Giemsa stain (4 d 2% horse-serum incubation). Scale bar = 100 μm; C: Immunofluorescence was used to detect relative expression and distribution of MYHC and Myod1 on day 4 with different treatments. Green, red, and blue signal represents MYHC, Myod1, and nucleus, respectively. Scale bar = 90 μm. M1CM, macrophage conditioned medium after stimulation of IF-C2C12-Exos.