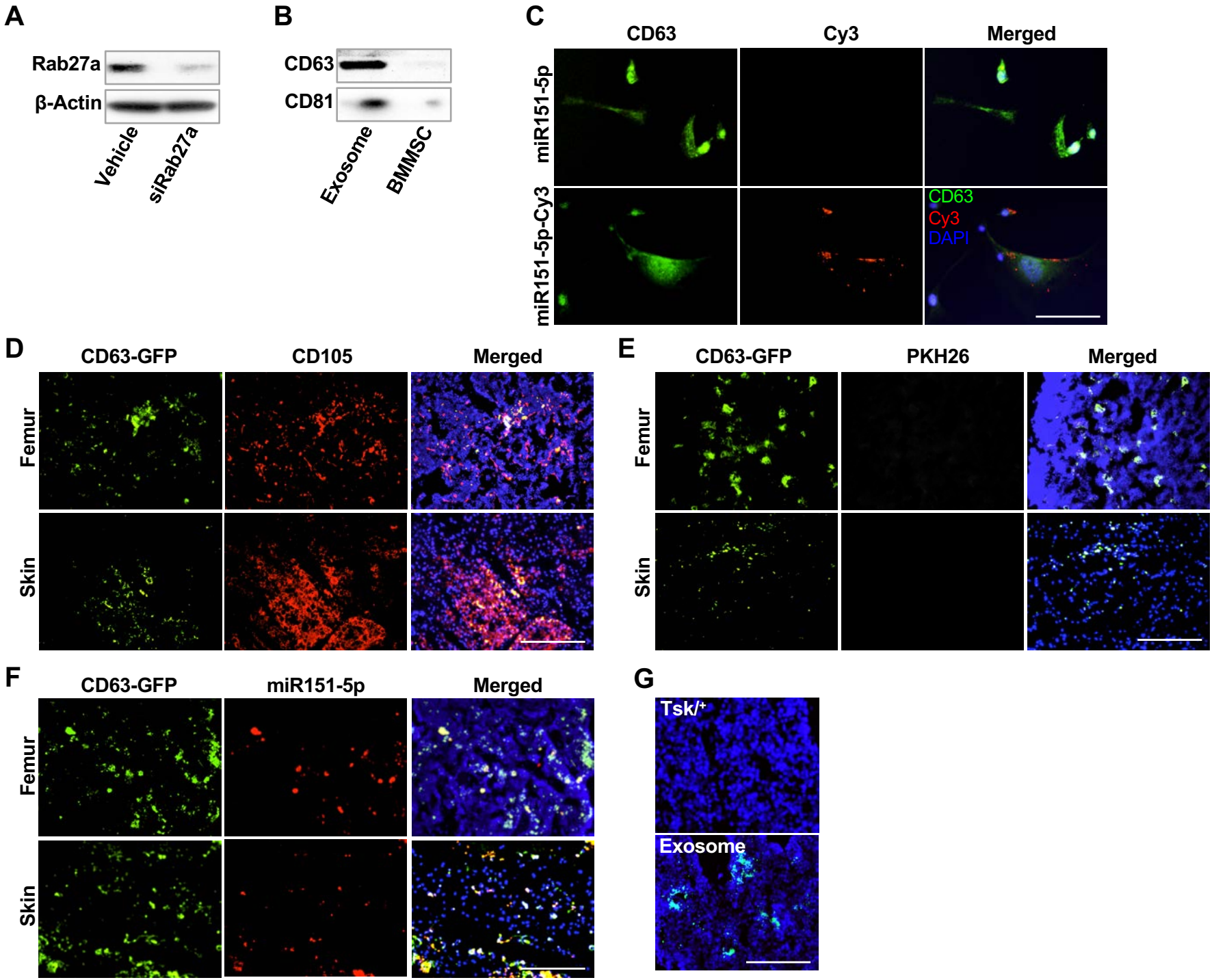
A
Rab27a
β-Actin
Vehicle
siRab27a
B
CD63
CD81
Exosome
BMMSC
C
CD63
Cy3
Merged
miR151-5p
miR151-5p-Cy3
CD63
Cy3
DAPI
D
CD63-GFP
CD105
Merged
Femur
Skin
E
CD63-GFP
PKH26
Merged
Femur
Skin
F
CD63-GFP
miR151-5p
Merged
Femur
Skin
G
Tsk/+
Exosome

**Supplementary Figure 5. Exosome-mediated miR-151-5p transfer.** (**A**) Western blotting showing the expression levels of Rab27a in vehicle- and Rab27a siRNA-treated WT BMMSCs. β-Actin was used as a protein loading control. (**B**) Western blotting showing the expression levels of exosome -pecific surface markers CD63 and CD81 in exosomes and WT BMMSCs. (**C**) To examine whether miR-151-5p is able to transfer *via* exosomes, miR-151-5p was labeled with Cy3 red fluorescence dye and transfected into WT BMMSCs. CD63-positive green immunofluorescence co-localized with miR-151-5p-Cy3 to indicate that exosomes contain miR-151-5p. Scale bar, 25 μm. (**D**) CD63-GFP reporter vector was transfected in BMMSCs and performed MSCT in *Tsk*/$^{+}$ mice. After MSCT, immunofluoresce (IF) staining showed that CD63 co-localized with BMMSC marker CD105 in both the femur and skin in *Tsk*/$^{+}$ mice. Scale bar, 25 μm. (**E**) BMMSCs were labeled with red fluorescent dye, followed by transfection of CD63-GFP reporter vector and performed MSCT in *Tsk*/$^{+}$ mice to show that transplanted BMMSCs were not engrafted into the femur or skin in *Tsk*/$^{+}$ mice. Scale bar, 25 μmm. (**F**) CD63-GFP reporter vector was co-transfected with Cy3-labeled miR151-5p in BMMSCs, which were used to perform MSCT in *Tsk*/$^{+}$ mice. The data showed that MSCT-secreted CD63-GFP$^{+}$ EVs were co-localized with Cy3-miR151-5p in both bone marrow and skin after 24 hours MSC administration, indicating that MSCT was associated with the secretion of exosomal miR151-5p in *Tsk*/$^{+}$ mice. Scale bar, 25 μm. (**G**) PKH67-labled exosomes engrossed in bone marrow cells in *Tsk*/$^{+}$ mice. Scale bar, 25 μm.