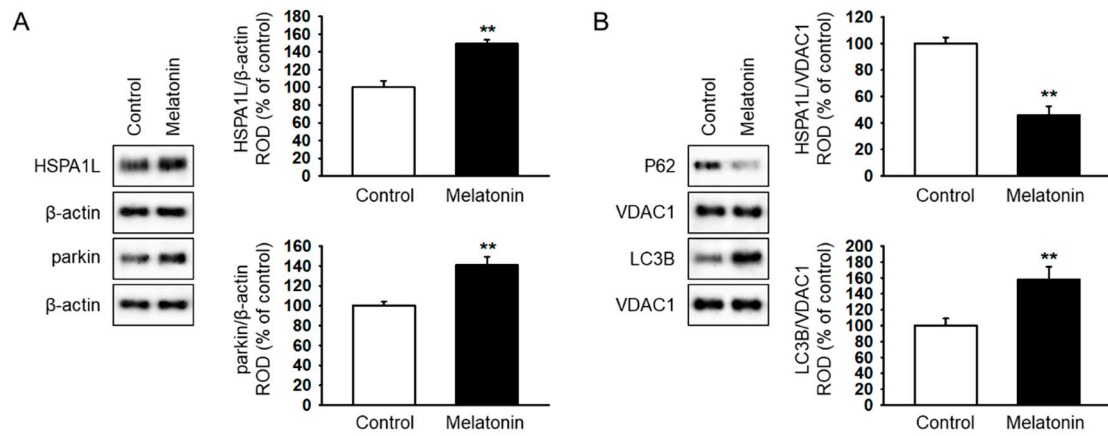
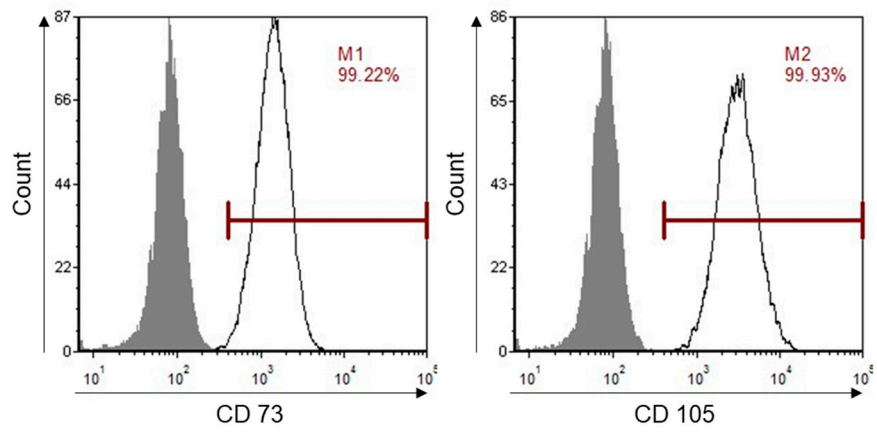


Supplementary Figure

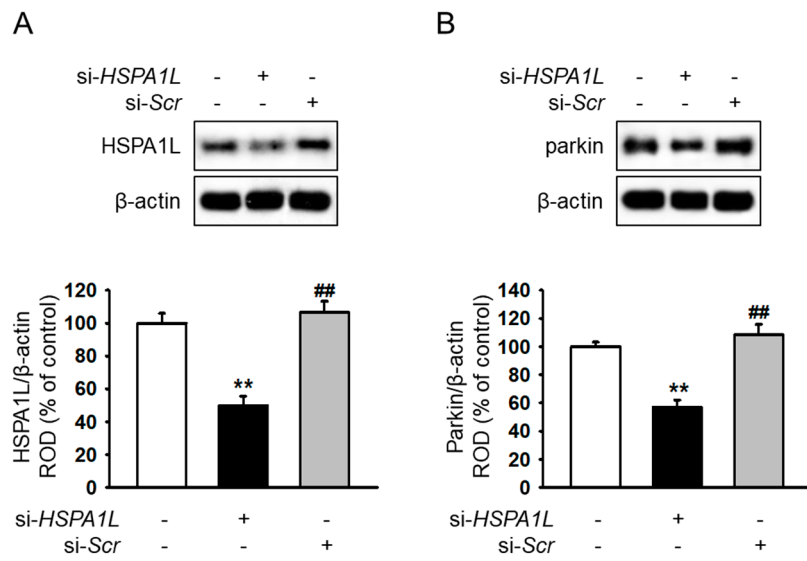


Supplementary Figure S1. Melatonin induces mitophagy by increasing the expression of HSPA1L and parkin. (A) Expression of HSPA1L and parkin in hMSCs treated with or without melatonin (1 μ M) for 24 h. The expression levels of HSPA1L and parkin were normalized with respect to that of β -actin. Values represent the mean \pm SEM. ** $p < 0.01$ vs. untreated hMSCs. (B) Expression of P62 and LC3B in hMSCs treated with or without melatonin (1 μ M) for 24 h. The expression levels of P62 and LC3B were normalized with respect to that of VDAC1. Values represent the mean \pm SEM. ** $p < 0.01$ vs. untreated hMSCs.

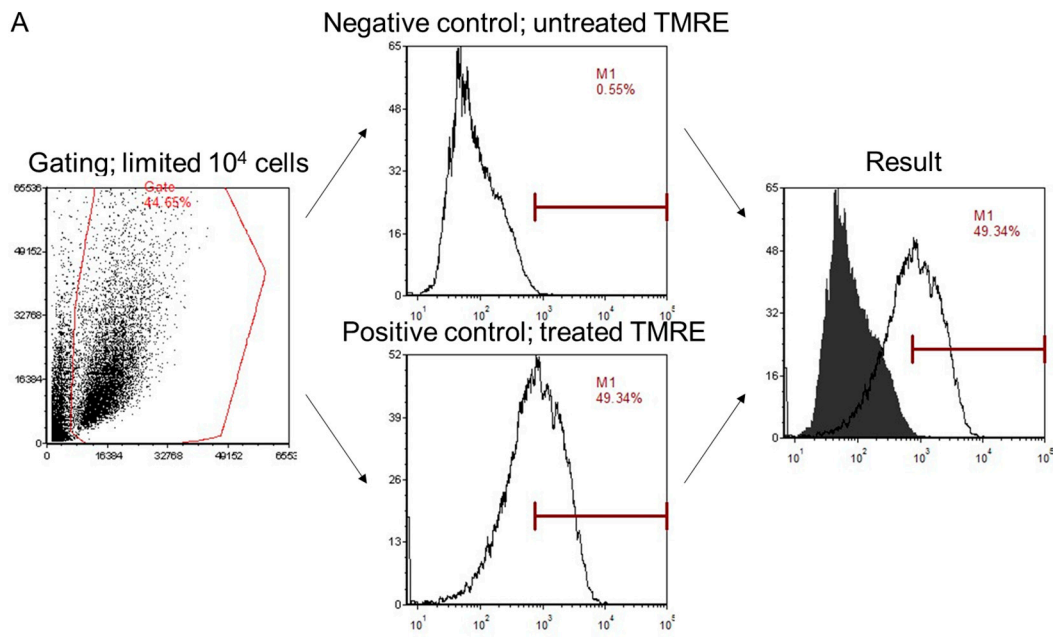
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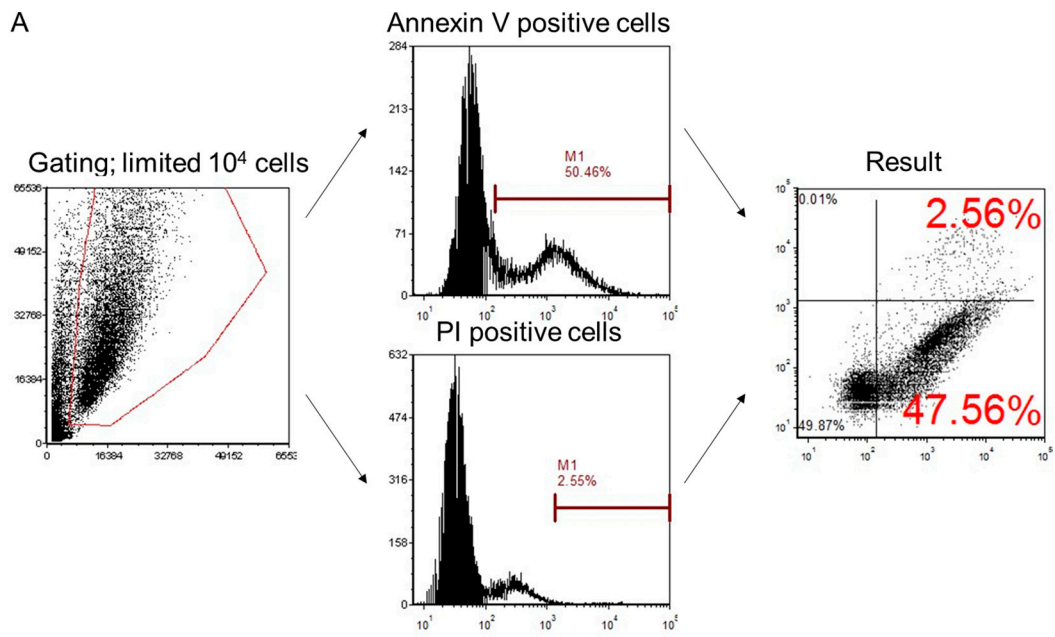
Supplementary Figure S2. Expression of hMSC surface markers. (A) MSC surface markers, including CD73, and CD105 were analyzed using flow cytometry. Gray lines indicate cell stained with isotype-matched IgG as a negative control. Black lines indicate cell stained with the indicated antibody.



Supplementary Figure S3. Expression of HSPA1L and parkin in hMSCs after treatment with scrambled siRNA or si-HSPA1L. (A) Expression of HSPA1L in hMSCs treated with si-HSPA1L or scrambled siRNA (si-Scr). The expression level of HSPA1L was normalized with respect to that of β-actin. Values represent the mean ± SEM. **p < 0.01 vs. untreated hMSCs, and ##p < 0.01 vs. treated si-HSPA1L. (B) Expression of parkin in hMSCs treated with or without melatonin (1 μM) for 24 h. The expression level of parkin was normalized with respect to that of β-actin. Values represent the mean ± SEM. **p < 0.01 vs. untreated hMSCs, and ##p < 0.01 vs. treated si-HSPA1L.



Supplementary Figure S4. FACS analyzed gating cells to distinguish the live cells from the total population. (A) Gray lines indicate the population of hMSCs untreated with TMRE as a negative control. Black lines indicate hMSCs stained with TMRE.



Supplementary Figure S5. Compensation of flow cytometry assay for Annexin V/PI staining. (A) Histograms for gating cells, Annexin V positive cells, PI positive cells, and Annexin/PI double positive cells.