cells P7 using SEQ ID NO: 15 and SEQ ID NO: 50 as target sequences in an oxidative stress environment.

FIG. 13 shows the survival rate (FIG. 13(a)), growth rate (FIG. 13(b)), population doubling level (PDL) (FIG. 13(c)), and population doubling time (PDT) (FIG. 13(d)) of stem cells knocking out the target sequences of SEQ ID NO: 15 (sgKeap1-BR#5) and SEQ ID NO: 50 (sgKEAP1-exon3-#23).

Figure 14 is a graph observing the degree of cell proliferation and cell cycle of KEAP1 knockout mesenchymal stem cells by BrdU analysis.

FIG. 15 is a graph showing the results of telomere length analysis of KEAP1 knockout mesenchymal stem cells.

FIG. 16 is a graph showing the results of confirming cytokines with increased expression in KEAP1 knockout mesenchymal stem cells through cytokine analysis.

FIG. 17 is a photograph and graph showing the results of collecting, staining, and analyzing lung tissue after IV administration of KEAP1 knockout MSCs to mice.

[Best Mode for Implementation of the Invention]

Hereinafter, the present disclosure will be described in more detail.

As used herein, the term "about" refers to quantity, level, value, number, frequency, percentage, dimension, size, amount, weight, or length that vary by 30, 25, 20, 15, 10, 9, 8, 7, 6, 5, 4, 3, 2 or 1 degrees with respect to a reference quantity, level, value, number, frequency,