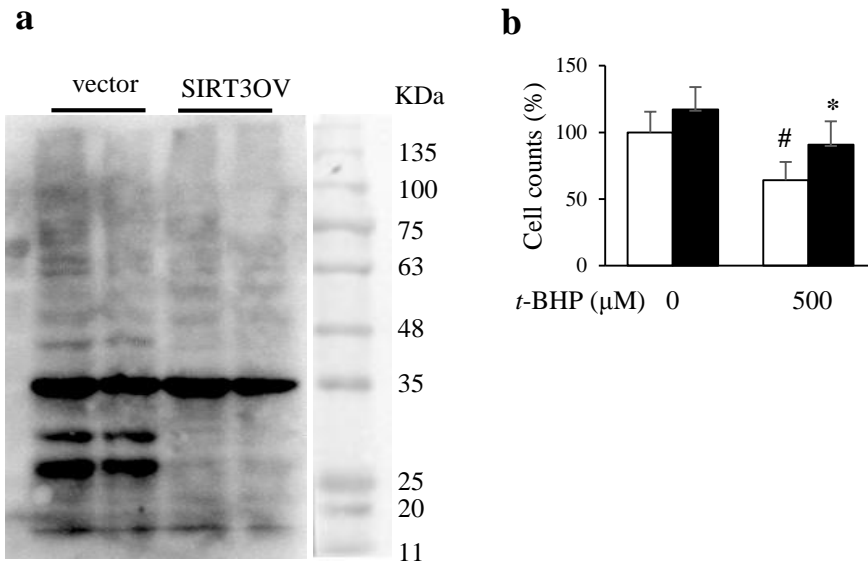


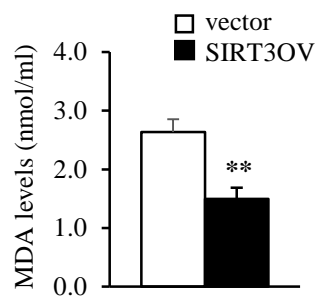
## Supplementary Figure S1



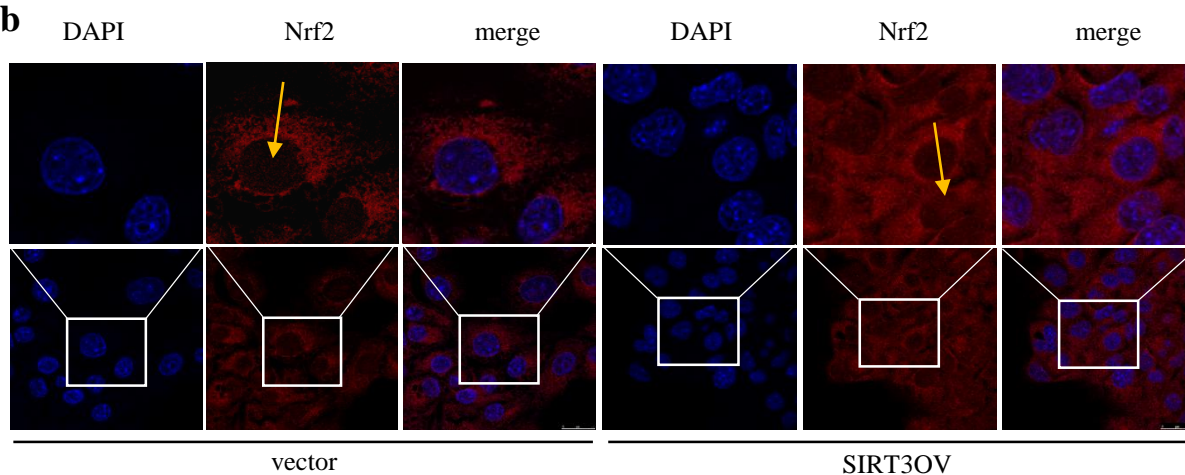
**Supplementary Figure S1 (a)** SIRT3 overexpression decreased acetylation level of total protein in *t*-BHP-treated AML12 cells. **(b)** Cell viability was determined by trypan blue dye exclusion. The number of viable cells were counted by 0.4% trypan blue stain exclusion using a hemocytometer and expressed as a percentage relative to control cells. \* $p < 0.05$ , and SIRT3OV vs. vector cells, and # $p < 0.05$  *t*-BHP-treated vs. ctrl cells.

## Supplementary Figure S2

**a**

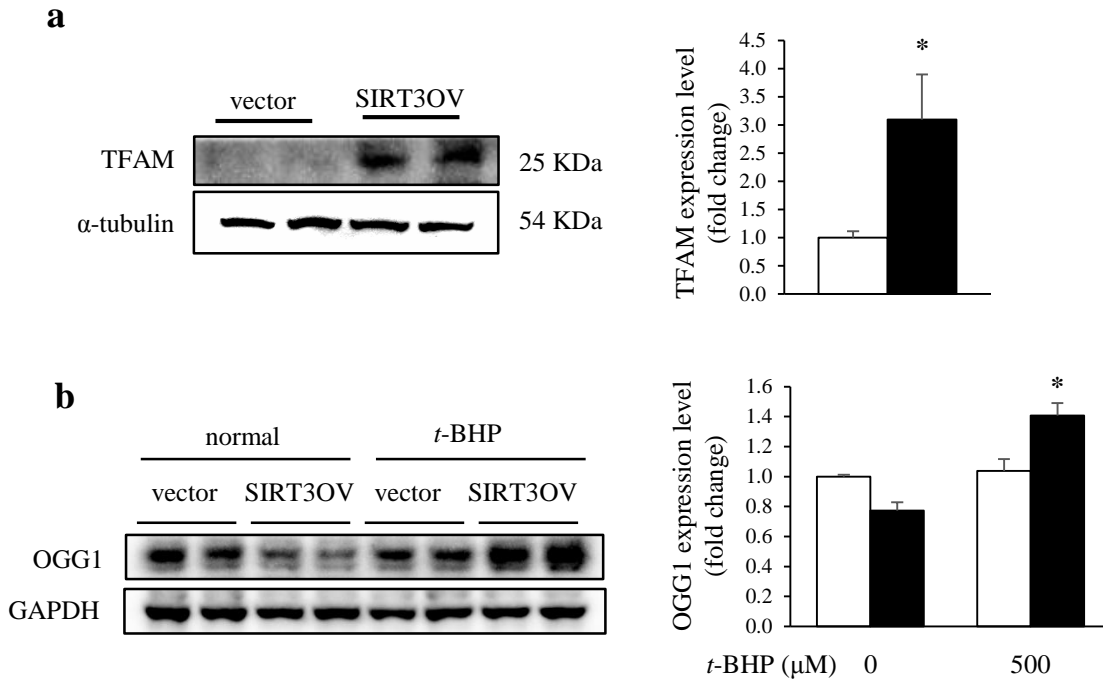


**b**



**Supplementary Figure S2 (a)** Intracellular MDA(malondialdehyde) level. **(b)** Confocal immunofluorescence image of total and nuclear Nrf2 protein. Nrf2 and nuclei were stained by Texas Red and DAPI, respectively. Scale bar, 10  $\mu$ m. \*\*p < 0.01, and SIRT3OV vs. vector cells.

## Supplementary Figure S3



**Supplementary Figure S3 (a)** TFAM protein level in vector and SIRT3 overexpressed AML12 cells treated with 500  $\mu$ M *t*-BHP for 12h. **(b)** OGG1 expression in the vector and SIRT3OV cells under normal and *t*-BHP treated conditions. \* $p < 0.05$ , and SIRT3OV vs. vector cells.

**Supplementary Table 1** The detailed information of antibodies used in immunoblotting.

Name	Cat.No.	Company
p-AMPK	SC-33524	Santa Cruz
AMPK	SC-25792	Santa Cruz
PGC1 $\alpha$	AB54481	Abcam
Tom20	SC-17764	Santa Cruz
Drp1	#8570	CST
MFN1	SC-50330	Santa Cruz
Nrf2	#12721	CST
KEAP1	#8047	CST
OPA1	SC-30573	Santa Cruz
$\alpha$ -tubulin	SC-8035	Santa Cruz
GAPDH	SC-25778	CST
Ku70	SC-135963	Santa Cruz
Bax	SC-526	Santa Cruz
SOD2	24127-1-AP	Proteintech Group
histone 3	SC-10809	Santa Cruz
OGG1	SC-376935	Santa Cruz
catalase	SC-50508	Santa Cruz
$\beta$ -actin	SC-1616	Santa Cruz
SIRT3	#5490	CST
Acetylated-Lysine	#9681	CST
Tom20	#42406	CST
MFN	17090-1-AP	Proteintech Group
MID49	16413-1-AP	Proteintech Group
Tom40	18409-1-AP	Proteintech Group
Sam50	20824-1-AP	Proteintech Group
Donkey anti-goat IgG HRP	SC-2020	CST
anti-rabbit IgG HRP	#7074	CST
anti-mouse IgG HRP	#7076	CST