Supplementary data

Reagents

Spirulina Maxima Extract was provided by GSI Creos Co., Ltd. (Tokyo, Japan). Trifolium Pratense (Clover) Flower Extract was provided by Arysta Health and Nutrition Sciences Co., Ltd. (Tokyo, Japan). Hinokitiol was provided by Takasago International Co., Ltd. (Tokyo, Japan). Camellia Japonica Seed Extract and Eucalyptus Globulus Leaf Extract were provided by NOF Co., Ltd. (Tokyo, Japan). Camellia Japonica Seed Extract-2, Coix Lacryma-Jobi Ma-yuen Seed Extract, and Hordeum vulgare Root Extract were provided by Sansho Pharmaceutical Co., Ltd. (Tokyo, Japan). Rosa Damascena Flower Water was provided by MP Gokyo Food & Chemical Co., Ltd. (Osaka, Japan). Santalum Album (Sandalwood) Wood Extract was provided by Shin-ei Chemical Co., Ltd. (Osaka, Japan).

Table S1 Additional antioxidant-related substances evaluated in this study.

ID	Materials	Addition concentration (% v/v)	Reference
A	Spirulina Maxima Extract, Sucrose, Lecithin	1	1
B	Trifolium Pratense (Clover) Flower Extract, Acetyl Tetrapeptide-3	1	2
C	Hinokitiol	1	3
D	Camellia Japonica Seed Extract	1	4
E	Camellia Japonica Seed Extract–2	0.25	
F	Coix Lacryma-Jobi Ma-yuen Seed Extract	1	5
G	Eucalyptus Globulus Leaf Extract	1	6
H	Hordeum vulgare Root Extract	1	7
I	Rosa Damascena Flower Water	1	8
J	Santalum Album (Sandalwood) Wood Extract	1	9

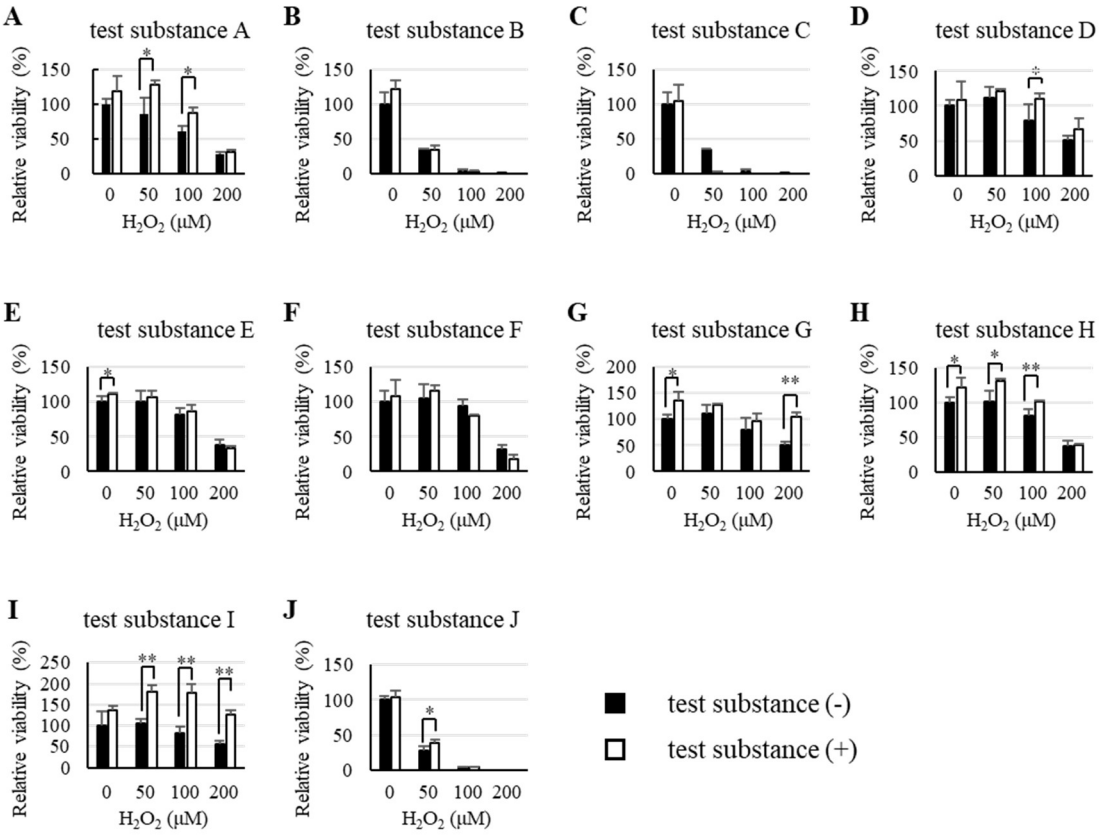

Figure S1 Evaluation of resistance to H_2O_2-induced cytotoxicity.

NHDFs were pre-treated with each test substance (A to J) for 24 hours and then treated with H_2O_2 (0, 50, 100, or 200 μM). Cell viability was assessed using Cell Counting Reagent SF 1 hour later. A to J represent the material IDs in Table S1. The data are represented as the mean ± standard deviation (SD); n=3. Statistical analysis was performed using the unpaired t-test; *P<0.05, **P<0.01.

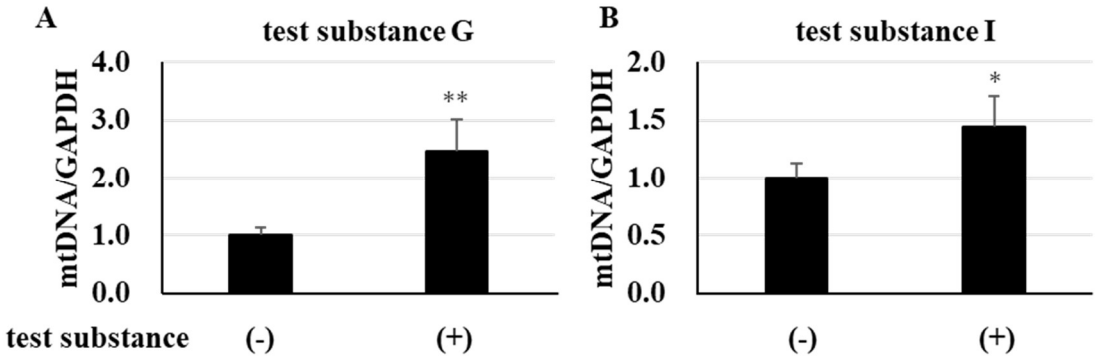

Figure S2 Effects of additional substances on PCR-based mtDNA amplifiability under H_2O_2 exposure

NHDFs were incubated with each test substance for 24 hours, then stimulated with H_2O_2 (200 μM) for 1 hour. Total DNA was extracted and relative mtDNA amplifiability was analyzed by qPCR. The data are represented as the mean ± SD; n=3. Statistical analysis was performed using the unpaired t-test; *P<0.05, **P<0.01.

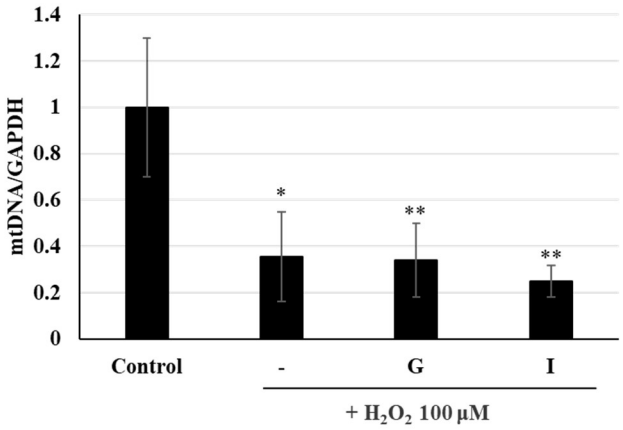

Figure S3 Effects of additional substances on PCR-based mtDNA amplifiability in a post-stress model.

NHDFs were treated with H_2O_2 (100 µM) for 45 minutes, then treated with test substances for 24 hours. Total DNA was extracted and relative mtDNA amplifiability was analyzed by qPCR. The data are represented as the mean ± SD; n=3. Statistical analyses were performed by one-way ANOVA, followed by the Bonferroni test; *P<0.05, **P<0.01 vs. control.

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