**Table S1.** List of primers used for the quantitative real-time reverse transcription-polymerase chain reaction.

|  |  |
| --- | --- |
| Gene name | Primer sequence |
| *bec-1**lgg-1**atg-18**dct-1**hsp-60**cox-4* *cts-1**pyc-1* *hxk-1* *tba-1*  | Fw (5΄TGATCTCTGCTGACAAGGCTT3΄)Rv (5΄CCGACCTTGAATCCAGTTGG3΄) Fw (5΄GCACCAAAGTCAAAGCTCCA3΄)Rv (5΄CCTCGTGATGGTCCTGGTAG3΄)Fw (5΄TGGGGCACAAAGATGGCTA3΄) Rv (5΄CCAAGATGTGTAAGATTTTCGCC3΄) Fw (5΄ATCGCACAATCTCCTCACGT3΄) Rv (5΄GGACAGTCTTTGGAGGTGTATT3΄)Fw (5΄GGGGAAGCCCAAAGATCACA3΄) Rv (5΄TCCAGCCTCCTCATTAGCCT3*΄*)Fw (5΄GCCCCAATTCGCGCCAAGGA3΄) Rv (5΄AGGTTGGCGGCAGTTCTGGG3΄)Fw (5΄CTCGACAACTTCCCAGATAACC3΄) Rv (5΄GGTACAGGTTGCGATAGATGATAGC3΄)Fw (5΄TCCAACTACTCCTCTTGCTACTGAC3΄) Rv (5΄GTGATCATACATCCTGGTCTACTGC3΄)Fw (5΄GTGCGACGAGTACTTTCTCAACTG3΄) Rv (5΄CTAGAGATGACGTCACACACTTCTC3΄)Fw (5΄TGATCTCTGCTGACAAGGCTT3΄)Rv (5΄CCGACCTTGAATCCAGTTGG3΄) |



**Supplementary figure S1.** Effect of combination of various concentrations of L-theanine treatment and different doses of UVC irradiation on L3 arrest. The most obvious reduction of L3 arrest was in the combination of UVC (12.5 J/m2) + L-theanine (50 µg/ml). Results are means ± SD (n = 5, t test, \* *P* < 0.05, \*\* *P* < 0.01).



**Supplementary figure S2.** Mutations in NER gene (*xpa-1, polh-1*, and *xpf-1*) did not affect L3 arrest in UVC-exposed *C. elegans* treated by L-theanine. Results are means ± SD (n = 5, t test, \*\* *P* < 0.01).



**Supplementary figure S3.** Effect of L-theanine treatment on the relative expression of mitochondrial energy metabolism related genes in UVC-exposed *C. elegans.* L-theanine treatment did not affect *hxk-1*(glycolysis) *and cts-1* (TCA cycle)mRNA levels in UVC-exposed *C. elegans* treated by L-theanine, but up-regulated *pyc-1* (TCA cycle)and *cox-4* (mitochondrial respiratory chain*)* expression. Results are means ± SD (n = 5, t test, \*\* *P* < 0.01).