**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΄) |

茶氨酸剂量图

**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).

NER+茶氨酸

**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).

代谢

**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).