

SUPPLEMENTARY TABLES

Table S1. Clones of cDNAs and docking sites of *pUAST-attB* vector in *UAS* lines.

UAS strains	Gene	DGRC Clone	Docking Site
<i>UAS-CSE[LD22661]</i>	<i>CSE/CG12264</i>	LD22661	2L: 22A3
<i>UAS-CSE[LD22255]</i>	<i>CSE/CG5345</i>	LD22255	3L: 62E1
<i>UAS-CBS[LD21426]</i>	<i>CBS/CG1753</i>	LD21426	2L: 22A3

Table S2. List of primers for qRT-PCR.

Gene	Forward	Reverse
<i>CSE/CG12264</i>	5'-CTTTCTTTGCGTGAGATGGA-3'	5'-GTATGTGGCTTTGGCATCAC-3'
<i>CSE/CG5345</i>	5'-GTGTGGATCGAGTCACCAAC-3'	5'-GGAGGTCAGGAAGGTGTTGT-3'
<i>CBS/CG1753</i>	5'-AGATTACGCCAACATCCTC-3'	5'-CTCGCACTTGGCATAACATCT-3'
<i>β-Tubulin</i>	5'-GGCCAACTGAACGCTGATCT-3'	5'-AAGCCGGGCATGAAGAAGTG-3'

Table S3. Relative expression level of *CSE[LD22661]*, *CSE[LD22255]*, *CBS[LD21426]* genes driven by *da-GAL4*.

Gene	Males		Females	
	Control	Overexpression	Control	Overexpression
<i>CSE[LD22661]</i>	1.00±0.09	2.37±0.37*	1.00±0.15	1.31±0.36
<i>CSE[LD22255]</i>	1.00±0.02	6.10±0.04*	1.00±0.01	3.75±0.04*
<i>CBS[LD21426]</i>	1.00±0.01	1.86±0.02*	1.00±0.02	1.06±0.03

* $p < 0.05$, Mann-Whitney U-test. Errors indicate standard error of the mean.

Table S4. The P-values for differences in survival functions at specific time points (times of 25%, 50%, 75% and 90% mortality) calculated with Fisher's exact test.

Variants	Sex	Conditions	P-value at 25%	P-value at 50%	P-value at 75%	P-value at 90%
<i>da-GAL4>UAS-CSE[LD22661]</i> v.s. <i>da-GAL4</i>	males	paraquat	0.0428	0.0428	0.7828	0.7828
<i>da-GAL4>UAS-CSE[LD22661]</i> v.s. <i>UAS-CSE[LD22661]</i>	males	paraquat	0.0299	0.0299	0.6287	0.6287
<i>da-GAL4>UAS-CSE[LD22255]</i> v.s. <i>da-GAL4</i>	males	paraquat	0.1217	0.1217	0.0964	0.0964
<i>da-GAL4>UAS-CSE[LD22255]</i> v.s. <i>UAS-CSE[LD22255]</i>	males	paraquat	1	1	0.8279	1
<i>da-GAL4>UAS-CBS[LD21426]</i> v.s. <i>da-GAL4</i>	males	paraquat	0.2198	0.2198	0.7826	0.7826
<i>da-GAL4>UAS-CBS[LD21426]</i> v.s. <i>UAS-CBS[LD21426]</i>	males	paraquat	0.412	0.412	1	1
<i>da-GAL4>UAS-CSE[LD22661]</i> v.s. <i>da-GAL4</i>	males	hyperthermia	6.9e-13	4.8e-13	4.8e-13	1
<i>da-GAL4>UAS-CSE[LD22661]</i> v.s. <i>UAS-CSE[LD22661]</i>	males	hyperthermia	1.1e-12	4.8e-13	4.8e-13	1

<i>da-GAL4>UAS-CSE[LD22255]</i> <i>da-GAL4</i>	v.s.	males	hyperthermia	6.2e-13	1.3e-12	0.0008	0.0008
<i>da-GAL4>UAS-CSE[LD22255]</i> <i>UAS-CSE[LD22255]</i>	v.s.	males	hyperthermia	2e-13	0.0008	0.0008	0.0008
<i>da-GAL4>UAS-CBS[LD21426]</i> <i>da-GAL4</i>	v.s.	males	hyperthermia	4.1e-13	0.0234	0.0234	0.0234
<i>da-GAL4>UAS-CBS[LD21426]</i> <i>UAS-CBS[LD21426]</i>	v.s.	males	hyperthermia	6e-13	0.0234	0.0234	0.0234
<i>da-GAL4>UAS-CSE[LD22661]</i> <i>da-GAL4</i>	v.s.	males	arid and food-free	8.6e-13	3.7e-13	1.2e-11	0.0154
<i>da-GAL4>UAS-CSE[LD22661]</i> <i>UAS-CSE[LD22661]</i>	v.s.	males	arid and food-free	1.1e-12	1.1e-12	6.1e-7	1
<i>da-GAL4>UAS-CSE[LD22255]</i> <i>da-GAL4</i>	v.s.	males	arid and food-free	7.6e-13	7.3e-13	1e-12	0.0051
<i>da-GAL4>UAS-CSE[LD22255]</i> <i>UAS-CSE[LD22255]</i>	v.s.	males	arid and food-free	1.6e-12	6.7e-13	8.5e-13	1.1e-7
<i>da-GAL4>UAS-CBS[LD21426]</i> <i>da-GAL4</i>	v.s.	males	arid and food-free	5.3e-12	1.1e-7	2.8e-12	0.0068
<i>da-GAL4>UAS-CBS[LD21426]</i> <i>UAS-CBS[LD21426]</i>	v.s.	males	arid and food-free	0.0098	0.0258	0.0052	0.014
<i>da-GAL4>UAS-CSE[LD22661]</i> <i>da-GAL4</i>	v.s.	females	paraquat	2.7e-9	0.0005	1	1
<i>da-GAL4>UAS-CSE[LD22661]</i> <i>UAS-CSE[LD22661]</i>	v.s.	females	paraquat	6.8e-7	0.0009	1	1
<i>da-GAL4>UAS-CSE[LD22255]</i> <i>da-GAL4</i>	v.s.	females	paraquat	9.3e-13	9.7e-9	1	1
<i>da-GAL4>UAS-CSE[LD22255]</i> <i>UAS-CSE[LD22255]</i>	v.s.	females	paraquat	0.0000064	0.0000064	0.0005	1
<i>da-GAL4>UAS-CBS[LD21426]</i> <i>da-GAL4</i>	v.s.	females	paraquat	1.5e-12	0.0000014	1	1
<i>da-GAL4>UAS-CBS[LD21426]</i> <i>UAS-CBS[LD21426]</i>	v.s.	females	paraquat	0.869	0.869	0.1968	1
<i>da-GAL4>UAS-CSE[LD22661]</i> <i>da-GAL4</i>	v.s.	females	hyperthermia	1.4e-12	1.5e-12	6.8e-13	1
<i>da-GAL4>UAS-CSE[LD22661]</i> <i>UAS-CSE[LD22661]</i>	v.s.	females	hyperthermia	4.9e-13	4.8e-13	1.8e-12	1
<i>da-GAL4>UAS-CSE[LD22255]</i> <i>da-GAL4</i>	v.s.	females	hyperthermia	5.7e-13	5.7e-13	3.3e-8	1
<i>da-GAL4>UAS-CSE[LD22255]</i> <i>UAS-CSE[LD22255]</i>	v.s.	females	hyperthermia	0.0001	0.5088	1	1
<i>da-GAL4>UAS-CBS[LD21426]</i> <i>da-GAL4</i>	v.s.	females	hyperthermia	1e-12	1e-12	9e-9	1
<i>da-GAL4>UAS-CBS[LD21426]</i> <i>UAS-CBS[LD21426]</i>	v.s.	females	hyperthermia	7.9e-9	8.1e-9	8.1e-9	1
<i>da-GAL4>UAS-CSE[LD22661]</i> <i>da-GAL4</i>	v.s.	females	arid and food-free	8e-13	6.7e-13	6.7e-13	0.0318
<i>da-GAL4>UAS-CSE[LD22661]</i> <i>UAS-CSE[LD22661]</i>	v.s.	females	arid and food-free	1.2e-11	5.6e-13	8.9e-13	0.031
<i>da-GAL4>UAS-CSE[LD22255]</i> <i>da-GAL4</i>	v.s.	females	arid and food-free	5.6e-13	9.7e-13	3e-13	0.0000015
<i>da-GAL4>UAS-CSE[LD22255]</i> <i>UAS-CSE[LD22255]</i>	v.s.	females	arid and food-free	1.1e-12	4.1e-13	3.3e-10	0.0000071
<i>da-GAL4>UAS-CBS[LD21426]</i> <i>da-GAL4</i>	v.s.	females	arid and food-free	2.4e-10	0.000029	0.0000015	0.0000015
<i>da-GAL4>UAS-CBS[LD21426]</i> <i>UAS-CBS[LD21426]</i>	v.s.	females	arid and food-free	0.1506	0.0443	0.0443	0.0032