

S1 Table. List of genotypes

Fig 1

B

Gal80, ubi- α Cat, FRT40A/hsFLP ; Act-Gal4, α -Cat/da-Gal4,UAS-GFP, α -Cat

Gal80, ubi- α Cat, FRT40A/hsFLP; act-Gal4, α -Cat, UAS-P35/da-Gal4, UAS-GFP, α -Cat

C

en-Gal4, UAS-RFP/+ ; UAS- α -Cat-RNAi(1)/ +

en-Gal4, UAS-RFP/+ ; UAS- α -Cat-RNAi(1), α -Cat/+

D

en-Gal4, UAS-RFP/+ ; UAS- α -Cat-RNAi(1)/UAS-P35

en-Gal4, UAS-RFP/+ ; UAS- α -Cat-RNAi(1), α -Cat/UAS-P35

E

en-Gal4, UAS-RFP/+

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(1)/ +

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(1)/ UAS-P35

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(1), α -Cat/+

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(1), α -Cat/ α -CatR

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/+

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ α -CatR

Fig 2

A

en-Gal4, UAS-RFP/+; Puc^{E697}-lacZ/+

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(1)/ Puc^{E697}-lacZ

en-Gal4, UAS-RFP/Rho1⁷²⁰/+; UAS- α -Cat-RNAi(1)/ Puc^{E697}-lacZ

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(1), UAS-P35/ Puc^{E697}-lacZ

C

en-Gal4, UAS-RFP, ex-lacZ/+; UAS- α -Cat-RNAi(1)/+

en-Gal4, UAS-RFP, ex-lacZ/+; UAS- α -Cat-RNAi(1), UAS-P35/+

en-Gal4, UAS-RFP/yki^{B5}

en-Gal4, UAS-RFP/yki^{B5}; UAS- α -Cat-RNAi(1)/+

D

en-Gal4, UAS-RFP/+

en-Gal4, UAS-RFP/yki^{B5}

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(1)/ +

en-Gal4, UAS-RFP/yki^{B5}; UAS- α -Cat-RNAi(1)/+

Fig 3**A**

en-Gal4, UAS-RFP, ex-lacZ/+;

en-Gal4, UAS-RFP, ex-lacZ/UAS-DEcad-RNAi

en-Gal4, UAS-RFP, ex-lacZ/UAS-DEcad-RNAi; UAS-P35/+

Ben-Gal4, UAS-RFP/+; Puc^{E697}-lacZ/+en-Gal4, UAS-RFP/UAS-DEcad-RNAi; Puc^{E697}-lacZ/+en-Gal4, UAS-RFP/UAS-DEcad-RNAi; Puc^{E697}-lacZ/UAS-P35**C**

en-Gal4, UAS-RFP, ex-lacZ/+

en-Gal4, UAS-RFP, ex-lacZ/UAS-DEcad-RNAi

en-Gal4, UAS-RFP, ex-lacZ/UAS-DEcad-RNAi; UAS-P35/+

Den-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(1), α -Cat/+en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(1), α -Cat/UAS-DEcad:: α -Cat**E**

en-Gal4, UAS-RFP/+

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(1), α -Cat/+en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(1), α -Cat1/UAS-DEcad:: α -Cat**Fig 4****B**en-Gal4, UAS-RFP/+; Jub::**GFP**/+**C**en-Gal4, UAS-RFP/+; Jub::**GFP**/+; UAS- α -Cat-RNAi(1)/+**D**en-Gal4, UAS-RFP/+; Jub::**GFP**/+; UAS- α -Cat-RNAi(1)/UAS-DEcad:: α -Cat**E**en-Gal4, UAS-RFP/+; Jub::**GFP**/+; UAS- α -Cat-RNAi(1)/UAS-DEcad $\Delta\beta$:: α -Cat Δ N**F**

en-Gal4, UAS-RFP/+

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(1)/+en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(1)/UAS-DEcad:: α -Caten-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(1)/UAS-DEcad $\Delta\beta$:: α -Cat Δ N

Fig 5**A**

omb-Gal4/+
omb-Gal4/+; UAS- α -Cat-RNAi(1)/+
omb-Gal4/+; UAS- α -Cat
yki^{ts}/+
omb-Gal4/+; yki^{ts}/+; UAS- α -Cat/+
omb-Gal4/+; Jub-RNAi/+
omb-Gal4/+; Jub-RNAi/+; UAS- α -Cat/+

B

omb-Gal4/+
yki^{ts}/+
omb-Gal4/+; UAS- α -Cat/+
omb-Gal4/+; yki^{ts}/+; UAS- α -Cat/+
omb-Gal4/+; Jub-RNAi/+
omb-Gal4/+; Jub-RNAi/+; UAS- α -Cat/+

C

en-Gal4, UAS-RFP, ex-lacZ/+
en-Gal4, UAS-RFP, ex-lacZ/+; UAS-ft-RNAi/+
en-Gal4, UAS-RFP, ex-lacZ/+; UAS- α -Cat/+
en-Gal4, UAS-RFP, ex-lacZ/+; UAS-ft-RNAi/ UAS- α -Cat
en-Gal4, UAS-RFP, ex-lacZ/+; yki^{ts}/+; UAS- α -Cat/UAS-ft-RNAi

D

en-Gal4, UAS-RFP, ex-lacZ/+
en-Gal4, UAS-RFP, ex-lacZ/+; UAS-ft-RNAi/+
en-Gal4, UAS-RFP, ex-lacZ/+; UAS-ft-RNAi/ UAS- α -Cat
en-Gal4, UAS-RFP, ex-lacZ/+; UAS-crb-RNAi/+
en-Gal4, UAS-RFP, ex-lacZ/+; UAS-crb-RNAi/ UAS- α -Cat
en-Gal4, UAS-RFP, ex-lacZ/+; UAS-ex-RNAi/+
en-Gal4, UAS-RFP, ex-lacZ/+; UAS-ex-RNAi/UAS- α -Cat

Fig 6**A**

en-Gal4, UAS-RFP/+
en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/+
en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR
en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- Δ M
en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- Δ M1
en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -Cat- Δ M2

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- Δ M3

B

omb-Gal4/+

omb-Gal4/+; UAS- α -CatR- Δ M1/+

yki^{ts}/+

omb-Gal4/+; yki^{ts}/+; UAS- α -CatR- Δ M1/+

omb-Gal4/+; Jub-RNAi/+

omb-Gal4/+; Jub-RNAi/+; UAS- α -CatR- Δ M1/+

C

en-Gal4, UAS-RFP/+

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/+

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- Δ M

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- Δ M1

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -Cat- Δ M2

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- Δ M3

D

omb-Gal4/+

omb-Gal4/+; UAS- α -CatR- Δ M1/+

yki^{ts}/+

omb-Gal4/+; yki^{ts}/+; UAS- α -CatR- Δ M1/+

omb-Gal4/+; Jub-RNAi/+

omb-Gal4/+; JubRNAi/+; UAS- α -CatR- Δ M1/+

E

en-Gal4, UAS-RFP/+

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- Δ M

F

en-Gal4, UAS-RFP, *ex-LacZ*/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- Δ M

Fig 7

A

en-Gal4, UAS-RFP/+; Jub::*GFP*/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR

B

en-Gal4, UAS-RFP/+; Jub::*GFP*/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- Δ M

C

en-Gal4, UAS-RFP/+; Jub::*GFP*/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- Δ M1

D

en-Gal4, UAS-RFP/+; Jub::*GFP*/+; UAS- α -Cat-RNAi(2)/ UAS- α -Cat- Δ M2

E

en-Gal4, UAS-RFP/+; Jub::*GFP*/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- Δ M3

F

Same genotypes as in A-E.

G

en-Gal4, UAS-RFP/+; Jub::GFP/+
vinc102.1/Y; Jub::GFP/+

H

en-Gal4, UAS-RFP/+; Jub::GFP/+
vinc102.1/Y; Jub::GFP/+

I

en-Gal4, UAS-RFP/+
vinc102.1/Y; Jub::GFP/+

Fig 8**A**

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR
 en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR-H1
 en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- $\Delta\beta$ H
 en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR-H1- $\Delta\beta$ H
 en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(1)/ UAS- α -CatR-3A
 en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(1)/ UAS- α -CatR- Δ ABD

B

Same genotypes as in A.

C

en-Gal4, UAS-RFP/+; Jub::GFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR-H1

D

en-Gal4, UAS-RFP/+; Jub::GFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- $\Delta\beta$ H

E

en-Gal4, UAS-RFP/+; Jub::GFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR-H1- $\Delta\beta$ H

F

en-Gal4, UAS-RFP/+; Jub::GFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR
 en-Gal4, UAS-RFP/+; Jub::GFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR-H1
 en-Gal4, UAS-RFP/+; Jub::GFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- $\Delta\beta$ H
 en-Gal4, UAS-RFP/+; Jub::GFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR-H1- $\Delta\beta$ H

Fig 9**A, B**

en-Gal4, UAS-RFP/+; Jub::GFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR
 en-Gal4, UAS-RFP/+; Jub::GFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- Δ M
 en-Gal4, UAS-RFP/+; Jub::GFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- Δ M1

en-Gal4, UAS-RFP/+; Jub::GFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR-H1

C, D

Same genotypes in A.

S1 Fig

A

hsFLP; Act<CD2<GAL4, UAS-GFP/+; UAS- α -Cat-RNAi(1)/+

B

hsFLP; Act<CD2<GAL4, UAS-GFP/+; UAS- α -Cat-RNAi(2)/+

S2 Fig

Whole animal rescue plotted for following genotypes:

α -Cat

act-Gal4, da-Gal4, α -Cat/ α -Cat, UAS- α -CatR

act-Gal4, da-Gal4, α -Cat/ α -Cat, UAS- α -CatR- Δ M

act-Gal4, da-Gal4, UAS-DEcad $\Delta\beta$:: α -Cat Δ N

act-Gal4, da-Gal4, α -Cat/ α -Cat, UAS-DEcad $\Delta\beta$:: α -Cat Δ N

S3 Fig

A

en-Gal4, UAS-RFP/+

en-Gal4, UAS-RFP/+; UAS-crb-RNAi/+

en-Gal4, UAS-RFP/+; UAS- α -Cat/+

en-Gal4, UAS-RFP/+; UAS-crb-RNAi/UAS- α -Cat

B

en-Gal4, UAS-RFP/+

en-Gal4, UAS-RFP/+; UAS-ex-RNAi/+

en-Gal4, UAS-RFP/+; UAS- α -Cat/+

en-Gal4, UAS-RFP/+; UAS-ex-RNAi/UAS- α -Cat

S4 Fig

A

en-Gal4, UAS-RFP/+

B

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR

S5 Fig

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- Δ M

en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- Δ M1
en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- Δ M2
en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- Δ M3
en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR-H1
en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR- Δ β H
en-Gal4, UAS-RFP/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatRH1- Δ β H
en-Gal4, UAS-RFP/+; UAS- α -CatR-3A/+
en-Gal4, UAS-RFP/+; UAS- α -CatR- Δ ABD/+

S6 Fig

A

omb-Gal4/+; UAS- α -CatR/+
omb-Gal4/+; UAS- α -CatR- Δ M/+
omb-Gal4/+; UAS- α -CatR- Δ M1/+
omb-Gal4/+; UAS- α -Cat- Δ M2/+
omb-Gal4/+; UAS- α -CatR- Δ M3/+

B

en-Gal4, UAS-RFP/+; UAS- α -CatR/+
en-Gal4, UAS-RFP/+; UAS- α -CatR- Δ M1/+

C

en-Gal4, UAS-RFP/+; UAS- α -CatR/+
en-Gal4, UAS-RFP/+; UAS- α -CatR- Δ M1/+

D

Same genotypes as listed in C.

S7 Fig

en-Gal4, UAS-RFP, ex-lacZ/+
en-Gal4, UAS-RFP, ex-lacZ/+; UAS- α -Cat-RNAi(2)/ UAS- α -CatR-H1