

Extended Data Table 1

Transgenic fly lines made in this study

Genotype	Chromosome located
P{20×UAS-IVS-Ace2N-mNeon-v2}attP40	II
P{20×UAS-IVS-Ace2N-mNeon-v2}VK00027	III
P{20×UAS-IVS-pAce}attP40	II
P{20×UAS-IVS-pAce}VK00027	III
P{13xLexA-IVS-pAce}attP40	II
P{13xLexA-IVS-pAce}VK00027	III

Fly genotypes used in each figure

Figure	Genotype	Targeted neuron types	Chromosome(s)	No. of flies
Fig. 1c–f; Extended Data Fig. 1	MB502B(AD)/+; MB502B(DBD)/20×UAS-IVS-pAce	PPL1-γ1pedc; PPL1-α'2α2; PPL1-α3	II, III	28
	MB065B(AD)/+; MB065B(DBD)/20×UAS-IVS-pAce	PPL1-γ2α'1	II, III	20
	MB304B(AD)/+; MB304B(DBD)/20×UAS-IVS-pAce	PPL1-α'3	II, III	20
	MB085C(AD), MB085C(DBD)/20×UAS-IVS-pAce	MBON-γ1pedc>α/β	III	20
	MB077B(AD)/+; MB077B(DBD)/20×UAS-IVS-pAce	MBON-γ2α'1	III	20
	MB080C(AD), MB080C(DBD)/20×UAS-IVS-pAce	MBON-α2sc	III	20
	MB093C(AD), MB093C(DBD)/20×UAS-IVS-pAce	MBON-α'2; MBON-α3	III	37
	MB542B(AD)/+; MB542B(DBD)/20×UAS-IVS-pAce	MBON-α3m	II, III	20
	MB502B(AD)/+; MB502B(DBD)/20×UAS-IVS-pAce	PPL1-γ1pedc; PPL1-α'2α2; PPL1-α3	II, III	26
Fig. 2a–b	MB065B(AD)/+; MB065B(DBD)/20×UAS-IVS-pAce	PPL1-γ2α'1	II, III	12
	MB304B(AD)/+; MB304B(DBD)/20×UAS-IVS-pAce	PPL1-α'3	II, III	12
	MB502B(AD)/+; MB502B(DBD)/20×UAS-IVS-Ace2N-mNeon-v2	PPL1-γ1pedc; PPL1-α'2α2; PPL1-α3	II, III	19
Fig. 2c–d	MB065B(AD)/+; MB065B(DBD)/20×UAS-IVS-Ace2N-mNeon-v2	PPL1-γ2α'1	II, III	10
	MB304B(AD)/+; MB304B(DBD)/20×UAS-IVS-Ace2N-mNeon-v2	PPL1-α'3	II, III	10
	w1118	N.A.	N.A.	12
Fig. 2f–h; Extended Data Fig. 3b,c	MB502B(AD)/+; MB502B(DBD)/20×UAS-IVS-pAce	PPL1-γ1pedc; PPL1-α'2α2; PPL1-α3	II, III	24
	MB065B(AD)/+; MB065B(DBD)/20×UAS-IVS-pAce	PPL1-γ2α'1; PPL1-α'2α2	II, III	12
	MB304B(AD)/+; MB304B(DBD)/20×UAS-IVS-pAce	PPL1-α'3	II, III	12
Fig. 2i–l; Extended Data Fig. 3d–h	MB085C(AD), MB085C(DBD)/20×UAS-IVS-pAce	MBON-γ1pedc>α/β	III	12
	MB077B(AD)/+; MB077B(DBD)/20×UAS-IVS-pAce	MBON-γ2α'1	III	12
	MB080C(AD), MB080C(DBD)/20×UAS-IVS-pAce	MBON-α2sc	III	12
	MB093C(AD), MB093C(DBD)/20×UAS-IVS-pAce	MBON-α'2; MBON-α3	III	18
	MB542B(AD)/+; MB542B(DBD)/20×UAS-IVS-pAce	MBON-α3m	II, III	12
	w1118	N.A.	N.A.	12
Fig. 3b–c	MB502B(AD)/+; MB502B(DBD)/20×UAS-IVS-pAce	PPL1-γ1pedc; PPL1-α'2α2; PPL1-α3	II, III	19
	MB065B(AD)/+; MB065B(DBD)/20×UAS-IVS-pAce	PPL1-γ2α'1; PPL1-α'2α2	II, III	12
	MB304B(AD)/+; MB304B(DBD)/20×UAS-IVS-pAce	PPL1-α'3	II, III	12
Fig. 3f; Extended Data Fig. 5	MB085C(AD), MB085C(DBD)/20×UAS-IVS-pAce	MBON-γ1pedc>α/β	III	12
	MB077B(AD)/+; MB077B(DBD)/20×UAS-IVS-pAce	MBON-γ2α'1	III	12
	MB080C(AD), MB080C(DBD)/20×UAS-IVS-pAce	MBON-α2sc	III	12
	MB093C(AD), MB093C(DBD)/20×UAS-IVS-pAce	MBON-α'2; MBON-α3	III	23
	MB542B(AD)/+; MB542B(DBD)/20×UAS-IVS-pAce	MBON-α3m	II, III	12
	MB093C(AD), MB093C(DBD)/20×UAS-IVS-pAce	MBON-α3	III	24
Fig. 3g; Extended Data Fig. 6	MB502B(AD)/+; MB502B(DBD)/20×UAS-IVS-pAce	PPL1-α3	II, III	17
	TH-LexA/UAS-TnT; 13xLexA-IVS-pAce//MB085C(AD), MB085C(DBD)	PPL1-α3	II, III	12
	TH-LexA/+; 13xLexA-IVS-pAce/+	PPL1-α3	II, III	12
	20×UAS-CsChrimson-tdTomato/+; MB085C(AD), MB085C(DBD)/+	MBON-γ1pedc>α/β	II, III	24
	MB085C(AD), MB085C(DBD)/+	MBON-γ1pedc>α/β	III	24
	MB093C(AD), MB093C(DBD)/20×UAS-IVS-pAce	MBON-α3	III	102
Extended Data Fig. 3a	MB504B(AD)/+; MB504B(DBD)/20×UAS-IVS-Ace2N-mNeon-v2	PPL1-γ1pedc; PPL1-γ2α'1, PPL1-α'2α2	II, III	15
	MB502B(AD)/+; MB502B(DBD)/20×UAS-IVS-Ace2N-mNeon-v2	PPL1-γ1pedc; PPL1-α'2α2; PPL1-α3	II, III	14
	MB304B(AD)/+; MB304B(DBD)/20×UAS-IVS-Ace2N-mNeon-v2	PPL1-α'3	II, III	7
Extended Data Fig. 7b,d	UAS-TnT/+	N.A.	II	10
Extended Data Fig. 7c,e	UAS-TnT/+; MB093C(AD), MB093C(DBD)/+	MBON-α3	II, III	10
Extended Data Fig. 8a,c	MB065B(AD)/+; MB065B(DBD)/20×UAS-IVS-pAce	PPL1-α3	II, III	12
Extended Data Fig. 8b,d,e,f	MB065B(AD)/UAS×RDL-RNAi; MB065B(DBD), 20×UAS-IVS-pAce/+	PPL1-α3	II, III	12
Extended Data Fig. 12a,c	R82C10-LexA/+; 13xLexAop-jGCaMP7b/+	PPL1-α'2α2	II, III	12
Extended Data Fig. 12b,d	MB065B(AD)/+; MB065B(DBD)/20×UAS-jGCaMP7b	PPL1-α3	II, III	12
Extended Data Fig. 12e–h	MB065B(AD)/+; MB065B(DBD)/20×UAS-jGCaMP7b	PPL1-α3	II, III	14