Supplementary Table 1: Fly genotypes for functional characterizations.

Stock Genotype	Cells manipulated / Effector	Cells Recorded / Indicator	Used in Figure
w+(DL)/w^{1118};VT049479-LexAp65 (attP40)/ R38G02-p65ADZp (attP40); UAS-CsChrimson-mCherry (su(Hw)attP1), pGP-JFRC59-13XLexAop2-IVS-p10-GCaMP6f (VK00005)/ R24A07-ZpGdbd (attP2)	LPi4-3/ CsChrimson	LPLC2/GCaMP6f	Fig. 5e-i, Ext Fig. 7
w+(DL)/w^{1118};VT049479-LexAp65 (attP40)/ BPp65ADZp (attP40); UAS-CsChrimson-mCherry (su(Hw)attP1), pGP-JFRC59-13XLexAop2-IVS-p10-GCaMP6f (VK00005)/ BPZpGdbd (attP2)	Enhancerless Split Gal4/ CsChrimson	LPLC2/GCaMP6f	Ext Fig. 8
LexAop2-Syn21-opGCaMP6s (su(Hw)attP8), 10XUAS-Syn21-Chrimson-tdT-3.1 (attP18)/w^{1118}; VT049479-LexAp65 (attP40)/ R59E08-p65ADZp (attP40); +/R42F06-ZpGdbd (attP2)	T4,T5/ Chrimson	LPLC2/OpGCaMP6fs	Ext Fig. 2
LexAop2-Syn21-opGCaMP6s (su(Hw)attP8), 10XUAS-Syn21-Chrimson-tdT-3.1 (attP18)/w^{1118}; VT049479-LexAp65 (attP40)/ BPp65ADZp (attP40); +/ BPZpGdbd (attP2)	Enhancerless Split Gal4/ Chrimson	LPLC2/OpGCaMP6fs	Ext Fig. 2
w+(DL)/w^{1118}; +/ R38G02-p65ADZp(attP40); UAS-OpGCaMP6f (VK00005)/R24A07-ZpGdbd(attP2)	none	LPi4-3/OpGamp6f	Fig. 5c-d, Ext Fig. 6
w+(DL)/w^{1118}; +/ R19G02-p65AD (attP40); UAS-OpGCaMP6f (VK00005)/R75G12-ZpGdbd(attP2)	none	LPLC2/OpGamp6f	Fig. 2-4, Ext Fig. 3a-e, 4,5,10
w^{1118}/w+;R19G02-p65ADZp (attP40)/UAS-TNTe;R75G12-ZpGdbd (attP2)/+	LPLC2 (OL0048B) / TNTe	none	Ext Fig. 3f
w^{1118}/w+; R24A03-p65ADZp (attP40)/UAS-TNTe; R74C01-ZpGdbd (attP2)/+	Empty brain split-GAL4 control (SS1062) / TNTe	none	Ext Fig. 3f
w^{1118}/w+(DL);R19G02-p65ADZp(attP40)/+ (DL);R75G12-ZpGdbd(attP2)/pJFRC49-10XUAS-IVS-eGFPKir2.1 attP2 (DL)	LPLC2 (OL0048B) / Kir2.1	none	Ext Fig. 3f
w^{1118}/w+(DL); R24A03-p65ADZp (attP40)/+ (DL); R74C01-ZpGdbd(attP2)/pJFRC49-10XUAS-IVS-eGFPKir2.1 attP2 (DL)	Empty brain split-GAL4 control (SS1062) / Kir2.1	none	Ext Fig. 3f
LexAop2-myrGFP (su(Hw) attP8), 20xUAS CsChrimson mVenus (attP18)/ w^{1118}; R68A06-LexAp65 (VK00022)/ R19G02-p65AD (attP40); R75G12-DBD-ZpGdbd (attP2)	LPLC2 (OL0048B) / CsChrimson	Giant fiber/myrGFP	Fig. 1c
LexAop2-myrGFP (su(Hw)attP8), 20xUAS CsChrimson mVenus (attP18)/ w^{1118}; R68A06-LexAp65 (VK00022) / R24A03-p65ADZp (attP40); R74C01-ZpGdbd (attP2).	Empty brain split-GAL4 control (SS1062) / CsChrimson	Giant fiber/myrGFP	Fig. 1c