Supplemental Tables

Table S1. A list of all regions analyzed in this study and the abbreviations used to refer to them in the figures.

Region name	Abbreviation
accumbens nucleus, core	accore
accumbens nucleus, shell	acbshell
amygdalohippocampal area, anterolateral part	ahial
amygdalohippocampal area, posteromedial part	ahipm
amygdalopiriform transition area	apir
anterior amygdaloid area	aa
anterior cortical amygdaloid area	aco
anterior hypothalamic area, anterior part	aha
anterior hypothalamic area, central part	ahc
anterior hypothalamic area, posterior part	ahp
anterior insular cortex	ai
anterior pretectal nucleus	apt
anterior pretectal nucleus, dorsal part	aptd
anterodorsal thalamic nucleus	ad
anterodorsal thalamic nucleus adjacent	ad2
anteromedial thalamic nucleus	am
anteromedial thalamic nucleus, ventral part	amv
anteroventral thalamic nucleus	av
anteroventral thalamic nucleus, dorsomedial part	avdm
anteroventral thalamic nucleus, ventrolateral part	avvl
basolateral amygdaloid nucleus, anterior part	bla
basolateral amygdaloid nucleus, posterior part	blp
basolateral amygdaloid nucleus, ventral part	blv
basomedial amygdaloid nucleus	bma
caudate putamen (striatum)	cpu
caudomedial entorhinal cortex	cent
central amygdaloid nucleus, lateral division	cel
central amygdaloid nucleus, medial division	ceamy
central medial thalamic nucleus	cm
centrolateral thalamic nucleus	cl
cingulate cortex, area 1/anterior cingulate cortex	cg1/acc
cingulate cortex, area 2	cg2
cingulate cortex, area 2/ prelimbic frontal cortex	cg2/pl
claustrum	claus
cortex-amygdala transition zone	cxa
deep gray layer of the superior colliculus	dpg
deep white layer of the superior colliculus	dpwh
dorsal intermediate entorhinal cortex	dient
dorsal peduncular cortex	dp

dorsal raphe nucleus	dr
dorsal raphe nucleus - associated	dr ass
dorsal raphe nucleus, caudal part/dorsal raphe, interfascicular part	dr/cli
dorsal subiculum	ds
dorsolateral entorhinal cortex	dlent
dorsomedial hypothalamic nucleus	dmh
dorsomedial hypothalamic nucleus, compact part	dmc
ectorhinal cortex	ect
ethmoid thalamic nucleus	eth
extended amygdala- central part	eac
extended amygdala- medial part	eam
field CA1 of the hippocampus	ca1
field CA2 of the hippocampus	ca2
fields of Forel	ff
fornix	f
frontal association cortex	FrA
frontal cortex, area 3	fr3
globus pallidus	gp
infralimbic frontal cortex	il
insular cortex	ins
interanterodorsal thalamic nucleus	iad
interanteromedial thalamic nucleus	iam
intermediate gray layer of the superior colliculus	ing
intermediate white layer of the superior colliculus	inwh
intermediodorsal thalamic nucleus	imd
interstitial nucleus of Cajal, shell region	lnsh/c
lateral amygdala	la
lateral amygdaloid nucleus, dorsolateral part	ladl
lateral amygdaloid nucleus, ventrolateral part	lavl
lateral amygdaloid nucleus, ventromedial part	lavm
lateral habenular nucleus	lhb
lateral hypothalamic area	lh
lateral hypothalamic area - adjacent	lhaa
lateral orbital frontal cortex	lo
lateral parietal association cortex	lpta
lateral posterior thalamic nucleus, laterorostral part	lplr
lateral posterior thalamic nucleus, mediorostral part	lpmr
lateral preoptic area	lpoa
lateral septal nucleus	ls
laterodorsal thalamic nucleus, dorsomedial part	lddm
laterodorsal thalamic nucleus, ventrolateral part	ldvl
lithoid nucleus	lth
magnocellular nucleus of the posterior commissure	mcpc

medial amygdaloid nucleus, anterior part	mea
medial amygdaloid nucleus, anterodorsal	mead
medial amygdaloid nucleus, posterodorsal part	mepd/v
medial entorhinal cortex	ment
medial habenular nucleus	mhb
medial orbital frontal cortex	mo
medial parietal association cortex	mpta
medial preoptic area	mpa
medial pretectal nucleus	mpt
medial septal nucleus	ms
medial terminal nucleus	mt
median raphe nucleus	mnr
mediodorsal thalamic nucleus	md
mediodorsal thalamic nucleus, central part	mdc
mediodorsal thalamic nucleus, lateral part	mdl
mediodorsal thalamic nucleus, medial part	mdm
mesencephalic reticular formation	mrt
motor cortex, primary	m1
motor cortex, secondary	m2
nucleus of Darkschewitsch	dk
nucleus of the horizontal limb of the diagonal band	hdb
nucleus of the optic	OT
nucleus of the posterior commissure	pcom
nucleus of the vertical limb of the diagonal band	vdb
nucleus of the vertical limb of the diagonal band/medial septum	vbd/ms
oculomotor nerve	3n
oculomotor nucleus, parvicellular part	3pc
olfactory nerve layer	olf
olivary pretectal nucleus	opt
optic nerve layer of the superior colliculus	op
oval paracentral thalamic nucleus	opc
p1 reticular formation	p1rt
parabrachial pigmented nucleus of the VTA	pbp
paracentral thalamic nucleus	pc
parafascicular thalamic nucleus	pf
paramedian raphe nucleus	pmnr
pararubral nucleus	par
parasubiculum	pas
paratenial thalamic nucleus	pt
paratrochlear nucleus	pa4
paraventricular thalamic nucleus	pv
parietal cortex, posterior area, dorsal part	ptpd
parietal cortex, posterior area, rostral part	ptpr
peduncular part of lateral hypothalamus	plh

peduncular part of lateral hypothalamus/lateral hypothalamus	plh/lh
pedunculotegmental nucleus	ptg
periaqueductal gray	pag
perirhinal cortex	prh
piriform cortex	pir
pontine reticular nucleus, oral part	pno
posterior hypothalamic nucleus	ph
posterior pretectal nucleus	ppt
posterior thalamic nuclear group	po
posterolateral cortical amygdaloid area	plco
posteromedial cortical amygdaloid area	pmco
posteromedian thalamic nucleus	pomn
postsubiculum	post
precommissural nucleus	prc
precuneiform area	prcnf
prelimbic frontal cortex	pl
premammillary nucleus, dorsal part	pmd
premammillary nucleus, ventral part	pmv
prepositus nucleus	pr
presubiculum	prs
primary auditory cortex	au1
primary somatosensory cortex	s1
primary somatosensory cortex, barrel field	s1bf
primary somatosensory cortex, dysgranular zone	s1dz
primary somatosensory cortex, forelimb region	s1fl
primary somatosensory cortex, hindlimb region	s1hl
primary somatosensory cortex, trunk region	s1tr
primary somatosensory cortex, upper lip region	s1ul
primary visual cortex	v1
primary visual cortex, binocular area	v1b
primary visual cortex, monocular area	v1m
red nucleus	r
red nucleus, magnocellular part	rmc
red nucleus, parvicellular part	rpc
reticular nucleus (prethalamus)	rt
retroethmoid nucleus	reth
retromammillary nucleus	rm
retromammillary nucleus, lateral part	rml
retromammillary nucleus, medial part	rmm
retroparafascicular nucleus	rpf
retrorubral field	rrf
retrosplenial dysgranular cortex	rsd
retrosplenial granular cortex, a region	rsga
retrosplenial granular cortex, b region	rsgb

retrosplenial granular cortex, c region	rsgc
retrouniens area	rre
reuniens thalamic nucleus	re
rhomboid thalamic nucleus	rh
rostral amygdalopiriform area	rapir
rostral interstitial nucleus	ri
rostral linear nucleus (midbrain)	rli
secondary auditory cortex, dorsal area	aud
secondary auditory cortex, ventral area	auv
secondary somatosensory cortex	s2
secondary visual cortex, lateral area	v2l
secondary visual cortex, mediolateral area	v2ml
secondary visual cortex, mediomedial area	v2mm
septofimbrial nucleus	sfi
subiculum, transition area	str
submedius thalamic nucleus	sub
substantia innominata, basal part	sib
substantia nigra, compact part, dorsal tier	sncd
substantia nigra, reticular part	snr
superficial gray layer of the superior colliculus	sug
supraoculomotor cap	su3c
tectospinal trac	ts
temporal association cortex	tea
thalamus - unspecified	tunsp
ventral anterior thalamic nucleus	va
ventral anterior thalamic nucleus/ventrolateral thalamic nucleus	va/vl
ventral intermediate entorhinal cortex	vient
ventral orbital cortex	vo
ventral pallidum	vp
ventral part of claustrum	vcl
ventral posterior nucleus of the thalamus, parvicellular part	vppc
ventral posterolateral thalamic nucleus	vpl
ventral posteromedial thalamic nucleus	vpm
ventral subiculum	vs
ventral tegmental area	vta
ventrolateral thalamic nucleus	vl
ventromedial hypothalamic nucleus	vmh
ventromedial thalamic nucleus	vm
zona incerta	zi
zona incerta, caudal part	zic
zona incerta, dorsal part	zid
zona incerta, ventral part	ziv

Table S2. Statistics of the comparisons made in Figure 3.

Comparison	Measure	Test	Significance
Figure 3D: Starter cell analysis, interneurons	% dual-labeled neurons by region	2way ANOVA; Interaction: F(21,64)=0.90; p=0.58 Region: F(7,64)=60.6; p<0.0001 Cre Line: F(3,64)=0.17; p=0.91	Tukey's post-hoc tests: p<0.0001 for IL vs. each region in each line
Figure 3D: Starter cell analysis, projection neurons	% dual-labeled neurons by region	2way ANOVA; Interaction: F(21,72)=0.83; p=0.67 Region: F(7,72)=59.92; p<0.0001 Cre Line: F(3,72)=0.006; p=0.99	Tukey's post-hoc tests: p<0.001 for IL vs. each region in each line
Figure 3E: Starter cell correlations, interneurons	Correlation between starter cells and total cells	Two-tailed Spearman n=12 pairs	r= 0.8266, p<0.0001
Figure 3E: Starter cell correlations, projection neurons	Correlation between starter cells and total cells	Two-tailed Spearman n=13 pairs	r= 0.7912, p=0.002
Figure 3E: Starter cell correlations, all	Correlation between starter cells and total cells	Two-tailed Spearman n=25 pairs	r= 0.8058, p<0.0001

N.B.- all p-values reflect adjusted values for multiple comparisons

Table S3. Statistics of the comparisons made in Figure 4.

Comparison	Measure	Test	Significance
Figure 4B: Input fraction along anterior-posterior axis, pooled	input fraction at location	2way ANOVA; Interaction: F(14,360)=1.68; p=0.05 Location: F(14,360)=26.03; p<0.0001 Cell class: F(1,360)=2e-13; p>0.99	Sidak's post-hoc test: none
Figure 4B: Input fraction along anterior-posterior axis, interneurons	input fraction at location	2way ANOVA; Interaction: F(42,120)=6.40; p<0.0001 Location: F(14,120)=28.62; p<0.0001 Cell class: F(3,120)=3e-10; p>0.99	Tukey's post-hoc test: **-0.5 to -1:** PV vs NDNF, p<0.0001 SST vs NDNF, p<0.0001 VIP vs NDNF, p<0.0001 **-1 to -1.5:** PV vs NDNF, p<0.0001 SST vs NDNF, p<0.0001 VIP vs NDNF, p<0.0001 **-3 to -3.5**: PV vs NDNF, p<0.005 VIP vs NDNF, p<0.005 **-3.5 to -4:** PV vs NDNF, p<0.0001 SST vs NDNF, p<0.0001 VIP vs NDNF, p<0.0001
Figure 4B: Input fraction along anterior-posterior axis, projections	input fraction at location	2way ANOVA; Interaction: F(42,150)=1.98; p=0.001 Location: F(14,150)=17.0; p<0.0001 Cell class: F(3,150)=6e-11; p=>0.99	Tukey's post-hoc test: **1.5 to 1.0:** BLA vs RE, p=0.03 **-0.5 to -1:** LEC vs RE, p=0.003; PAG vs RE, p=0.0004 **-3.5 to -4:** BLA vs LEC, p<0.0001; BLA vs PAG, p=0.01; LEC vs RE, p=0.001
Figure 4C: Input fraction at anterior peak, interneurons	input fraction at location	2way ANOVA; Interaction: F(18,56)=36.58; p<0.0001 Region: F(6,56)=276.5; p<0.0001 Cell class: F(3,56)=42.89; p<0.0001	Tukey's post-hoc test: **Thalamus:** PV vs NDNF, p<0.0001 SST vs NDNF, p<0.0001 VIP vs NDNF, p<0.0001
Figure 4C: Input fraction at anterior peak, projections	input fraction at location	2way ANOVA; Interaction: F(18,70)=4.85; p<0.0001	Tukey's post-hoc test: **Thalamus:** BLA vs LEC, p<0.0001; BLA vs. RE, p=0.009; BLA vs PAG, p<0.0001; LEC vs RE, p<0.0001;

		Region: F(6,70)=93.29; p<0.0001 Cell class: F(3,70)=4.41; p=0.006	RE vs PAG, p<0.0001
Figure 4C: Input fraction at posterior peak, interneurons	input fraction at location	2way ANOVA; Interaction: F(9,32)=3.94; p=0.001 Region: F(9,32)=68.62; p<0.0001 Cell class: F(3,32)=3.76; p=0.02	Tukey's post-hoc test: **Hippocampus:** PV vs NDNF, p<0.0005 SST vs NDNF, p<0.0005 VIP vs NDNF, p<0.0005
Figure 4C: Input fraction at posterior peak, projections	input fraction at location	2way ANOVA; Interaction: F(9,40)=1.28; p=0.27 Region: F(3,40)=65.46; p<0.0001 Cell class: F(3,40)=2.11; p=0.11	Tukey's post-hoc test: **Hippocampus:** BLA vs LEC, p=0.001; LEC vs RE, p=0.02
Figure 4D: Input fraction across the brain	input fraction across brain	2way ANOVA; Interaction: F(18,56)=13.51; p<0.0001 Region: F(6,56)=145.1; p<0.0001 Cell class: F(3,56)=0.35; p=0.78	Tukey's post-hoc test: **Hippocampus:** PV vs NDNF, p<0.0001 SST vs NDNF, p<0.0001 VIP vs NDNF, p<0.0001 **Thalamus:** PV vs NDNF, p<0.0001 SST vs NDNF, p<0.0001 VIP vs NDNF, p<0.0001 **Cortex:** PV vs VIP, p=0.007; PV vs NDNF, p=0.01; SST vs VIP, p=0.04;

N.B.- all p-values reflect adjusted values for multiple comparisons

Table S4. Statistics of the comparisons made in Figure 5.

Comparison	Measure	Test	Significance
Figure 5A: Input fraction within thalamus, interneurons	input fraction	2way ANOVA; Interaction: F(12,40)=7.82; p<0.0001 Location: F(4,40)=36.48; p<0.0001 Cell class: F(3,40)=19.41; p<0.0001	Tukey's post-hoc test: **Secondary thalamus:** PV vs NDNF, p<0.0001 SST vs NDNF, p<0.0001 VIP vs NDNF, p<0.0001 **Reuniens:** PV vs NDNF, p<0.0001 SST vs NDNF, p<0.0001 VIP vs NDNF, p<0.0001
Figure 5A: Input fraction within cortex, interneurons	input fraction	2way ANOVA; Interaction: F(15,48)=2.16; p=0.02 Location: F(5,48)=112.1; p<0.0001 Cell class: F(3,48)=3.9; p=0.01	Tukey's post-hoc test: **Frontal Association:** PV vs VIP, p=0.0006; PV vs NDNF, p=0.0001; SST vs VIP, p=0.01; SST vs NDNF, p=0.002
Figure 5B: Input fraction at individual regions	input fraction at location	2way ANOVA; Interaction: F(633,1696)=5.7; p<0.0001 Location: F(211,1696)=57.8; p<0.0001 Cell class: F(3,1696)=0.43; p=0.72	Tukey's post-hoc test: **BLA:** SST vs. NDNF, p=0.0009 **BLP:** PV vs. NDNF, p=0.006 **AI:** PV vs SST, p<0.0001; PV vs NDNF, p=0.009; SST vs VIP, p<0.0001; SST vs NDNF, p<0.0001 **CG1/ACC:** PV vs SST, p<0.0001; PV vs VIP, p<0.0001; PV vs NDNF, p<0.0001 **CG2/PL:** PV vs SST, p=0.04 **M2:** PV vs VIP, p=0.01 PV vs NDNF, p<0.0001; SST vs NDNF, p=0.0004 **PIR:** PV vs SST, p<0.0001; PV vs VIP, p<0.0001; PV vs NDNF, p<0.0001; SST vs NDNF, p<0.0001; VIP vs NDNF, p<0.0001 **PL:** PV vs SST, p=0.02; PV vs VIP, p=0.02; **S2:** PV vs NDNF, p=0.003; SST vs NDNF, p<0.0001; VIP vs NDNF, p=0.0006 **CA1:** PV vs SST, p<0.0001; SST vs VIP, P<0.0001;

			PV vs NDNF, p<0.0001 SST vs NDNF, p<0.0001 VIP vs NDNF, p<0.0001 **DLENT:** SST vs NDNF, p=0.0009 **DS:** PV/SST/VIP vs NDNF, p<0.0001 **STR:** PV vs VIP, p=0.01; PV vs NDNF, p<0.0001; SST vs NDNF, p<0.0001 VIP vs NDNF, p<0.0001 **CLAUS:** PV vs NDNF, p=0.0001 SST vs NDNF, p=0.001 **INS:** PV vs SST, p=0.003; SST vs VIP, p=0.0007; SST vs NDNF, p=0.009 **OLF:** VIP vs NDNF, p=0.03 **AM:** PV vs NDNF, p<0.0001 SST vs NDNF, p<0.0001 VIP vs NDNF, p<0.0001 SST vs VIP, p=0.002 **MD:** PV vs NDNF, p=0.0002 SST vs NDNF, p=0.0007 VIP vs NDNF, p=0.0001 **PV:** SST vs NDNF, p=0.008 **RE:** PV vs NDNF, p<0.0001 SST vs NDNF, p<0.0001 VIP vs NDNF, p<0.0001 **SUB:** PV vs NDNF, p<0.0001 SST vs NDNF, p<0.0001 VIP vs NDNF, p<0.0001 **VA/VL:** SST/VIP vs NDNF, p=0.04 **VM:** PV vs NDNF, p<0.0001 SST vs NDNF, p<0.0001 VIP vs NDNF, p<0.0001

N.B.- all p-values reflect adjusted values for multiple comparisons

Table S5. Statistics of the comparisons made in Figure 6.

Comparison	Measure	Test	Significance
Figure 6A: Input fraction within thalamus, projection neurons	input fraction	2way ANOVA; Interaction: F(12,50)=3.58, p=0.0007 Location: F(4,50)=42.88; p<0.0001 Cell class: F(3,50)=10.61; p<0.0001	Tukey's post-hoc test: **Secondary thalamus:** BLA vs LEC, p=0.002; BLA vs RE, p=0.02; BLA vs PAG, p<0.0001; LEC vs RE, p<0.0001; RE vs PAG, p<0.0001
Figure 6A: Input fraction within cortex, projection neurons	input fraction	2way ANOVA; Interaction: F(15,60)=2.88; p=0.001 Location: F(5,60)=63.26; p<0.0001 Cell class: F(3,60)=0.27; p=0.84	Tukey's post-hoc test: **Frontal Association:** BLA vs LEC, p=0.005; LEC vs RE, p=0.01; **Temporal Association:** BLA vs LEC, p=0.0002 LEC vs RE, p=0.01 LEC vs PAG, p=0.03
Figure 6B: Input fraction at individual regions	input fraction at location	2way ANOVA; Interaction: F(633, 2120)=1.68; p<0.0001 Location: F(211, 2120)=49.45; p<0.0001 Cell class: F(3,2120)=0.13; p=0.93	Tukey's post-hoc test: **BLA:** BLA vs PAG, p=0.01; RE vs PAG, p=0.01 **BLP:** LEC vs. RE, p=0.02; RE vs. PAG, p=0.01 **CG1/ACC:** BLA vs PAG, p=0.0005; LEC vs PAG, p=0.04; **CG2:** BLA vs PAG, p=0.008 **IL**: BLA vs RE, p=0.01 **LO**: BLA vs LEC, p=0.04 **M2**: BLA vs LEC, p<0.0001 LEC vs RE, p=0.01; LEC vs PAG, p=0.02 **PIR**: BLA vs LEC, p<0.0001; BLA vs RE, p=0.02 BLA vs PAG, p<0.0001 LEC vs RE, p<0.0001 RE vs PAG, p<0.0001 **PL:** BLA vs LEC, p=0.0005; LEC vs RE, p=0.0007; LEC vs PAG, p=0.04 **CA1:** BLA vs LEC, p=0.0002; BLA vs PAG, p<0.0001; **DLENT:** BLA vs LEC, p<0.0001

			BLA vs PAG, p=0.02; LEC vs RE, p=0.0004 **DS:** BLA vs LEC, p=0.001 BLA vs RE, p<0.0001; LEC vs RE, p<0.0001; LEC vs PAG, p=0.02; RE vs PAG, p<0.0001 **STR:** BLA vs LEC, p<0.0001; LEC vs RE, p<0.0001; LEC vs PAG, p<0.0001 **VS:** BLA vs LEC, p=0.0002 BLA vs RE, p<0.0001 BLA vs PAG, p=0.0002 **DP:** BLA vs RE, p<0.0001 LAC vs RE, p<0.0001 RE vs PAG, p>0.0001 **INS:** BLA vs LEC, p=0.002; BLA vs PAG, p=0.03; **LS:** BLA vs RE, p<0.0001 LAC vs RE, p<0.0001 RE vs PAG, p<0.0001 **OLF:** BLA vs RE, p=0.04; RE vs PAG, p=0.02 **PRH:** BLA vs LEC, p=0.03 **AM:** BLA vs LEC, p<0.0001; BLA vs PAG, p<0.0001; LEC vs RE, p<0.0001; LEC vs PAG, p=0.006 RE vs PAG, p<0.0001 **MD:** BLA vs LEC, p=0.0003 LEC vs RE, p<0.0001 LEC vs PAG, p=0.001 **MDL:** BLA vs PAG, p=0.04 RE vs PAG, p=0.005 **PV:** BLA vs RE, p=0.01 LEC vs RE, p=0.002 LEC vs PAG, p=0.04 **RE:** LEC vs RE, p=0.01; **VMT:** RE vs PAG, p=0.03;

N.B.- all p-values reflect adjusted values for multiple comparisons

Table S6. Statistics of the comparisons made in Supplementary Figure 2.

Comparison	Measure	Test	Significance
Supplementary Figure 2B: interneuron dendritic morphology	dendritic material by distance from soma	2way ANOVA; Interaction: F(63,506)=6.13; p<0.0001 Distance: F(21,506)=87.76; p<0.0001 Cre Line: F(3,506)=75.84; p<0.0001	Tukey's post-hoc tests: **0-20µm:** PV vs. VIP, p=0.001; VIP vs NDNF, p=0.009 **20-40µm:** PV vs VIP, p=0.0001 PV vs NDNF, p=0.03 VIP vs NDNF, p<0.0001 **40-60µm:** PV vs VIP, p=0.0004 SST vs VIP, p=0.01 VIP vs NDNF, p=0.0008 **60-80µm:** PV vs VIP, p=0.04 PV vs NDNF, p=0.003 SST vs VIP, p=0.0006 SST vs NDNF, p<0.0001 **80-100µm:** PV vs SST, p=0.01 PV vs NDNF, p<0.0001 SST vs VIP, p=0.0006 SST vs NDNF, p<0.0001 VIP vs NDNF, p=0.0006 **100-120µm:** PV vs SST, p=0.004 PV vs NDNF, p<0.0001 SST vs VIP, p=0.003 SST vs. NDNF, p<0.0001 VIP vs NDNF, p<0.0001 **120-140µm:** PV vs SST, p=0.0002 PV vs NDNF, p<0.0001 SST vs VIP, p=0.0006 SST vs NDNF, p<0.0001 VIP vs NDNF, p<0.0001 **140-160µm:** PV vs SST, p=0.0004 PV vs NDNF, p<0.0001 SST vs VIP, p=0.003 SST vs NDNF, p<0.0001 VIP vs NDNF, p<0.0001 160-180µm: PV vs SST, p=0.002 PV vs NDNF, p<0.0001 SST vs VIP, p=0.04 SST vs NDNF, p<0.0001 VIP vs NDNF, p<0.0001 180-200µm: PV vs NDNF, p<0.0001 SST vs NDNF, p<0.0001 VIP vs NDNF, p<0.0001

			200-220µm: PV vs NDNF, p=0.0004 SST vs NDNF, p=0.004 VIP vs NDNF, p<0.0001 220-240µm: PV vs NDNF, p=0.02 240-260µm: SST vs NDNF, p=0.04
Supplementary Figure 2D: projection neuron dendritic morphology	dendritic material by distance from soma	2way ANOVA; Interaction: F(129,792)=2.69; p<0.0001 Distance from Soma: F(43,792)=31.15; p<0.0001 Projection: F(3,792)=7.09; p=0.0001	Tukey's post-hoc tests: Basal: none Apical: 20-40 µm: RE vs LEC, p=0.009; PAG vs. LEC, p=0.02 40-60 µm: RE vs LEC, p=0.01; PAG vs. LEC, p=0.01 60-80 µm: RE vs LEC, p=0.03; PAG vs. LEC, p=0.001; 80-100 µm: RE vs LEC, p=0.003; PAG vs. LEC, p=0.006 140-160 µm: PAG vs. LEC, p=0.03 320-340 µm: RE vs BLA, p=0.02; RE vs. LEC, p=0.02 340-360 µm: RE vs BLA, p=0.01; RE vs. LEC, p=0.002 PAG vs LEC, p=0.01 360-380 µm: RE vs BLA, p=0.04; RE vs. LEC, p=0.0004 PAG vs BLA, p=0.02 PAG vs LEC, p=0.0003 380-400 µm: RE vs BLA, p=0.0003; RE vs. LEC, p<0.0001 PAG vs BLA, p=0.0002 PAG vs LEC, p<0.0001 400-420 µm: RE vs BLA, p=0.01; RE vs. LEC, p=0.004 PAG vs BLA, p<0.0001 PAG vs LEC, p<0.0001 420-440 µm: RE vs BLA, p=0.03 RE vs. LEC, p=0.01 PAG vs BLA, p<0.0001 PAG vs LEC, p<0.0001 440-460 µm: RE vs PAG, p=0.03 RE vs BLA, p=0.02;

			RE vs. LEC, p=0.007 PAG vs BLA, p<0.0001 PAG vs LEC, p<0.0001 460-480 µm: RE vs BLA, p=0.02; RE vs. LEC, p=0.03 PAG vs BLA, p=0.0003 PAG vs LEC, p=0.0006 480-500 µm: RE vs BLA, p=0.03

N.B.- all p-values reflect adjusted values for multiple comparisons

Table S7. Statistics of the comparisons made in Supplementary Figure 3.

Comparison	Measure	Test	Significance
Supplementary Figure 3B: automatic vs manual counts	Correlations between cell numbers	Two-tailed Spearman n=9 region pairs	r=0.95, p<0.0004
Supplementary Figure 3B: adjacent section counts	Correlations between cell numbers	Two-tailed Spearman n=91 region pairs	r=0.89, p<0.0001
Supplementary Figure 3C: GFP+ neurons from datasets with no Cre vs with Cre	Cell number	Welch-corrected two tailed t-test: df=25.02, t=7.245	Cre transgene vs. no cre, p<0.0001

Table S8. Statistics of the comparisons made in Supplementary Figure 5.

Comparison	Measure	Test	Significance
Supplementary Figure 5C: Correlations among Cre lines	Pairwise correlations in input fraction	Two-tailed Spearman n=32 region pairs	PV vs SST, r=0.74, p<0.0001 PV vs VIP, r=0.82, p<0.0001 PV vs NDNF, r=0.22, p=0.22 SST vs VIP, r=0.75, p<0.0001 SST vs NDNF, r=0.19, p=0.29 VIP vs NDNF, r=0.35, p=0.04

Table S9. Statistics of the comparisons made in Supplementary Figure 6.

Comparison	Measure	Test	Significance
Supplementary Figure 6C: Correlations among projection neurons	Pairwise correlations in input fraction	Two-tailed Spearman n=38 region pairs	BLA vs LEC, r=0.41, p=0.01 BLA vs RE, r=0.31, p=0.05 BLA vs PAG, r=0.48, p=0.002 LEC vs RE, r=0.19, p=0.24 LEC vs PAG, r=0.51, p=0.0009 RE vs PAG, r=0.27, p=0.09

Table S10. Statistics of the comparisons made in Supplementary Figure 7.

Comparison	Measure	Test	Significance
Supplementary Figure 7: Full Two-way ANOVA among all IL postsynaptic cell classes	input fraction at location	2way ANOVA; Interaction: F(1477, 3816)=3.36; p<0.0001 Location: F(211, 3816)=101.2; p<0.0001 Cell class: F(7, 3816)=0.23; p=0.97	Tukey's post-hoc tests: **AI:** PV vs. SST, p<0.0001; PV vs. RE, p=0.0003; PV vs. PAG, p=0.0003; SST vs. VIP, p<0.0001; SST vs. NDNF, p<0.0001; SST vs. BLA, p<0.0001; SST vs. LEC, p<0.0001; SST vs. RE, p<0.0001; SST vs. PAG, p<0.0001 **AM**: PV vs. NDNF, p<0.0001; PV vs. LEC, p<0.0001; PV vs. PAG, p<0.0001; SST vs. VIP, p=0.02; SST vs. NDNF, p<0.0001; SST vs. BLA, p<0.0001; SST vs. LEC, p<0.0001; SST vs. RE, p<0.0001; SST vs. PAG, p<0.0001 VIP vs. NDNF, p<0.0001; VIP vs. RE, p=0.009; VIP vs. PAG, p<0.0001; NDNF vs. BLA, p<0.0001; NDNF vs. LEC, p<0.0001; NDNF vs. RE, p<0.0001; BLA vs. LEC, p<0.0001; BLA vs. PAG, p<0.0001; LEC vs. RE, p<0.0001; LEC vs. PAG, p=0.01; RE vs. PAG, p<0.0001 **BLA, anterior part:** PV vs. PAG, p=0.002; SST vs. NDNF, p=0.01; VIP vs. PAG, p=0.005; NDNF vs. BLA, p=0.01; NDNF vs. LEC, p=0.01; NDNF vs. PAG, p<0.0001; BLA vs. PAG, p=0.04; RE vs. PAG, p=0.02 **BLA, posterior part:** NDNF vs. LEC, p=0.02; NDNF vs. PAG, p=0.01; RE vs. PAG, p=0.03 **CA1:** PV vs. SST, p<0.0001; PV vs. NDNF, p<0.0001; PV vs. LEC, p<0.0001; PV vs. RE, p=0.002; PV vs. PAG, p<0.0001; SST vs. VIP, p<0.0001; SST vs. NDNF, p<0.0001; SST vs. BLA, p<0.0001; SST vs. LEC, p=0.007;

			SST vs. RE, p<0.0001; SST vs. PAG, p=0.03; VIP vs. NDNF, p<0.0001; VIP vs. LEC, p=0.001; VIP vs. PAG, p=0.0001; NDNF vs. BLA, p<0.0001; NDNF vs. LEC, p<0.0001; NDNF vs. RE, p<0.0001; NDNF vs. PAG, p<0.0001; BLA vs. LEC, p=0.0004; BLA vs. PAG, p<0.0001 **CG1/ACC:** PV vs. SST, p=0.0009; PV vs. VIP, p=0.0001; PV vs. NDNF, p<0.0001; PV vs. BLA, p<0.0001; PV vs. LEC, p<0.0001; PV vs. RE, p<0.0001; NDNF vs. PAG, p=0.006; BLA vs. PAG, p=0.0009 **CG2:** SST vs. PAG, p=0.03; NDNF vs. PAG, p=0.001; BLA vs. PAG, p=0.02 **CLAUS:** PV vs. NDNF, p=0.001; SST vs. NDNF, p=0.01 **DLEC:** PV vs. LEC, p=0.004; SST vs. NDNF, p=0.01; VIP vs. LEC, p=0.003; NDNF vs. LEC, p<0.0001; NDNF vs. PAG, p=0.008; BLA vs. LEC, p<0.0001; LEC vs. RE, p=0.0008 **DP:** PV vs. RE, p=0.0001; SST vs. RE, p<0.0001; VIP vs. RE, p<0.0001; NDNF vs. RE, p<0.0001; BLA vs. RE, p<0.0001; LEC vs. RE, p<0.0001; RE vs. PAG, p<0.0001 **DS:** PV vs. NDNF, p<0.0001; PV vs. LEC, p<0.0001; PV vs. RE, p<0.0001; SST vs. NDNF, p<0.0001; SST vs. BLA, p=0.005; SST vs. LEC, p<0.0001; SST vs. RE, p<0.0001; SST vs. PAG, p=0.003; VIP vs. NDNF, p<0.0001; VIP vs. LEC, p<0.0001; VIP vs. RE, p<0.0001;

			VIP vs. PAG, p=0.03; NDNF vs. BLA, p<0.0001; NDNF vs. RE, p<0.0001; NDNF vs. PAG, p<0.0001; BLA vs. LEC, p=0.003; BLA vs. RE, p<0.0001; LEC vs. RE, p<0.0001; RE vs. PAG, p<0.0001 **IL:** SST vs. RE, p=0.04; VIP vs. RE, p=0.02; BLA vs. RE, p=0.03 **INS:** PV vs. SST, p=0.03; SST vs. VIP, p=0.008; SST vs. LEC, p<0.0001; SST vs. RE, p=0.0001; SST vs. PAG, p<0.0001; BLA vs. LEC, p=0.004 **LS:** PV vs. RE, p=0.005; SST vs. RE, p<0.0001; VIP vs. RE, p=0.003; NDNF vs. RE, p<0.0001; BLA vs. RE, p<0.0001; LEC vs. RE, p=0.0001; RE vs. PAG, p<0.0001 **M2:** PV vs. NDNF, p<0.0001; PV vs. BLA, p<0.0001; SST vs. NDNF, p=0.005; SST vs. BLA, p=0.001; VIP vs. LEC, p=0.03; NDNF vs. LEC, p<0.0001; BLA vs. LEC, p<0.0001; LEC vs. RE, p=0.03; LEC vs. PAG, p=0.04 **MD:** PV vs. NDNF, p=0.003; PV vs. LEC, p<0.0001; SST vs. NDNF, p=0.008; SST vs. LEC, p<0.0001; VIP vs. NDNF, p=0.002; VIP vs. LEC, p<0.0001; NDNF vs. RE, p=0.0004; BLA vs. LEC, p=0.0005; LEC vs. RE, p<0.0001; LEC vs. PAG, p=0.002 **MDL:** RE vs. PAG, p=0.01 **PIR:** PV vs. SST, p=0.0005; PV vs. VIP, p<0.0001; PV vs. NDNF, p<0.0001; PV vs. LEC, p<0.0001;

			PV vs. RE, p=0.005; PV vs. PAG, p<0.0001; SST vs. NDNF, p<0.0001; SST vs. BLA, p=0.008; SST vs. LEC, p<0.0001; SST vs. PAG, p<0.0001; VIP vs. NDNF, p<0.0001; VIP vs. BLA, p<0.0001; VIP vs. LEC, p<0.0001; VIP vs. PAG, p<0.0001; NDNF vs. BLA, p<0.0001; NDNF vs. LEC, p<0.0001; NDNF vs. RE, p<0.0001; NDNF vs. PAG, p<0.0001; BLA vs. LEC, p<0.0001; BLA vs. PAG, p<0.0001; LEC vs. RE, p<0.0001; RE vs. PAG, p<0.0001 **PL:** PV vs. BLA, p=0.01; PV vs. RE, p=0.01; SST vs. LEC, p=0.01; VIP vs. LEC, p=0.01; BLA vs. LEC, p=0.0009; LEC vs. RE, p=0.001 **PRH:** PV vs. LEC, p=0.001; PV vs. PAG, p=0.03; SST vs. LEC, p=0.006; NDNF vs. LEC, p=0.007 **PVT:** PV vs. BLA, p=0.02; PV vs. LEC, p=0.003; VIP vs. BLA, p=0.01; VIP vs. LEC, p=0.001; NDNF vs. BLA, p=0.0001; NDNF vs. LEC, p<0.0001; BLA vs. RE, p=0.02; LEC vs. RE, p=0.004 **RE:** PV vs. NDNF, p<0.0001; PV vs. BLA, p<0.0001; PV vs. LEC, p<0.0001; PV vs. RE, p=0.04; PV vs. PAG, p=0.0006; SST vs. NDNF, p<0.0001; SST vs. BLA, p=0.004; SST vs. LEC, p<0.0001; SST vs. PAG, p=0.01; VIP vs. NDNF, p<0.0001; VIP vs. LEC, p=0.0001; NDNF vs. BLA, p<0.0001; NDNF vs. LEC, p<0.0001; NDNF vs. RE, p<0.0001; NDNF vs. PAG, p<0.0001;

			LEC vs. RE, p=0.03 **S2:** PV vs. NDNF, p=0.03; SST vs. NDNF, p=0.001; VIP vs. NDNF, p=0.007; NDNF vs. BLA, p=0.0002; NDNF vs. LEC, p=0.002; NDNF vs. RE, p=0.009; NDNF vs. PAG, p=0.002 **STR:** PV vs. NDNF, p<0.0001; PV vs. LEC, p<0.0001; SST vs. NDNF, p<0.0001; SST vs. BLA, p=0.009; SST vs. LEC, p<0.0001; SST vs. PAG, p=0.01; VIP vs. NDNF, p<0.0001; VIP vs. BLA, p<0.0001; VIP vs. LEC, p=0.001; VIP vs. RE, p=0.004; VIP vs. PAG, p<0.0001; NDNF vs. BLA, p<0.0001; NDNF vs. RE, p<0.0001; NDNF vs. PAG, p<0.0001; BLA vs. LEC, p<0.0001; LEC vs. RE, p<0.0001; LEC vs. PAG, p<0.0001 **SUB:** PV vs. NDNF, p=0.0002; SST vs. NDNF, p=0.0002; VIP vs. NDNF, p=0.001; NDNF vs. BLA, p<0.0001; NDNF vs. LEC, p=0.0007; NDNF vs. RE, p<0.0001; NDNF vs. PAG, p<0.0001 **VM:** PV vs. NDNF, p<0.0001; SST vs. NDNF, p<0.0001; VIP vs. NDNF, p<0.0001; NDNF vs. BLA, p<0.0001; NDNF vs. LEC, p<0.0001; NDNF vs. RE, p<0.0001; NDNF vs. PAG, p<0.0001 **VS:** PV vs. BLA, p<0.0001; SST vs. BLA, p<0.0001; VIP vs. BLA, p=0.0003; NDNF vs. BLA, p<0.0001; BLA vs. LEC, p=0.0003; BLA vs. RE, p<0.0001; BLA vs. PAG, p=0.0004

N.B.- all p-values reflect adjusted values for multiple comparisons