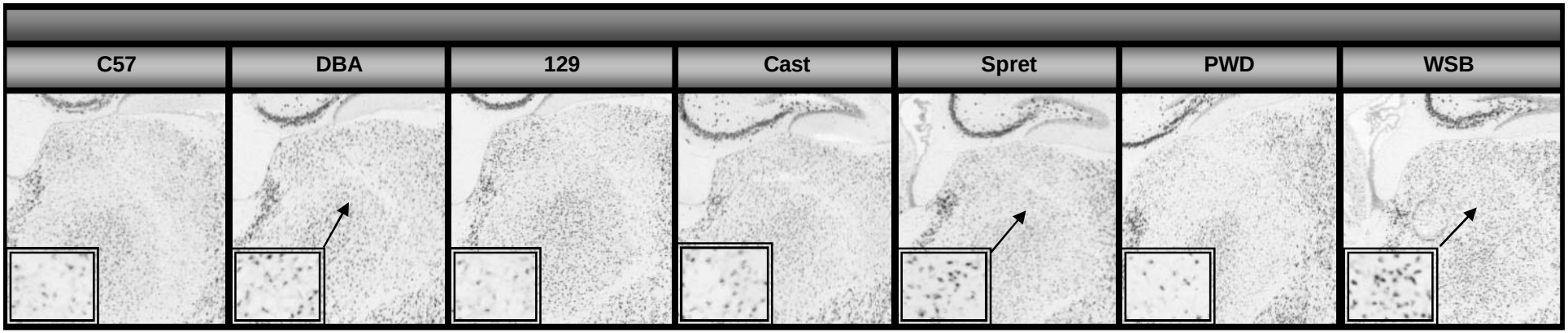
Supplemental Fig 1

- Strain differences are depicted below and summarized in a table of contents. Each panel caption states the type (density, intensity, or both) and direction of difference (solid arrows indicate increased, dashed arrows decreased, expression relative to C57. Subtle differences may be best appreciated by consulting the original data available at http:\\www.brain-map.org

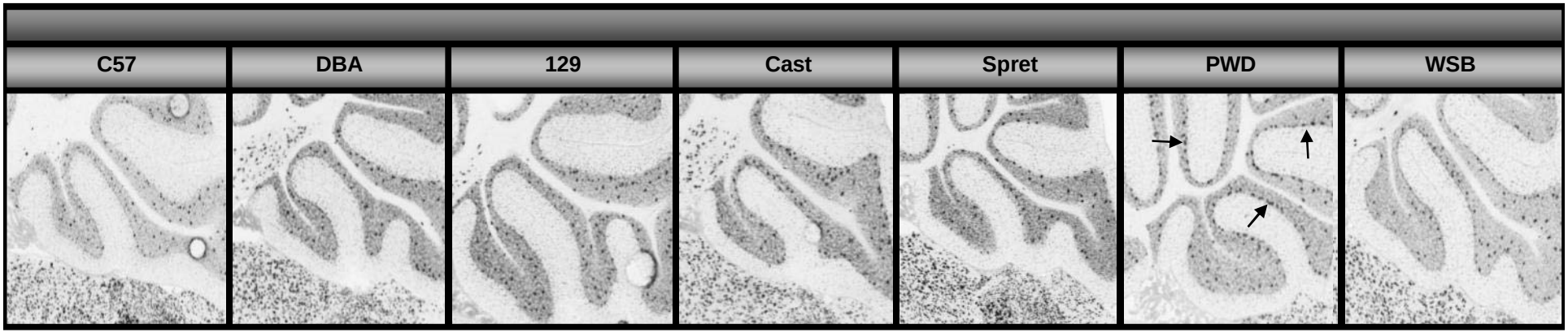
Ache



PO: … < DBA, Spret, WSB

The DBA, Spret, and WSB strains show greater intensity of acetylcholinesterase (Ache) expression in the posterior thalamic complex

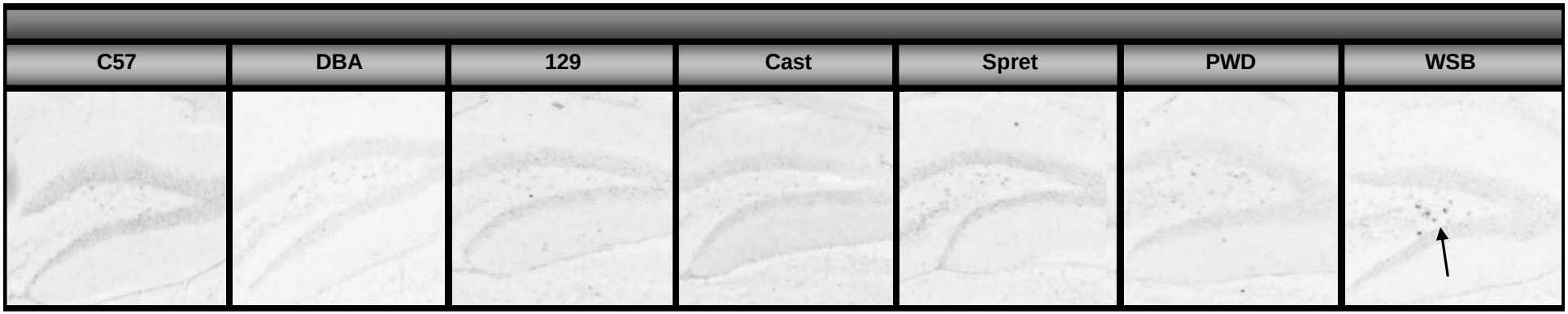
Ache



CBX(gr): … < PWD

The PWD strain shows greater density of acetylcholinesterase (Ache) expression in the cells lining the superficial portion of the cerebellar cortex granule layer

Adra2a



DG(po): … < WSB

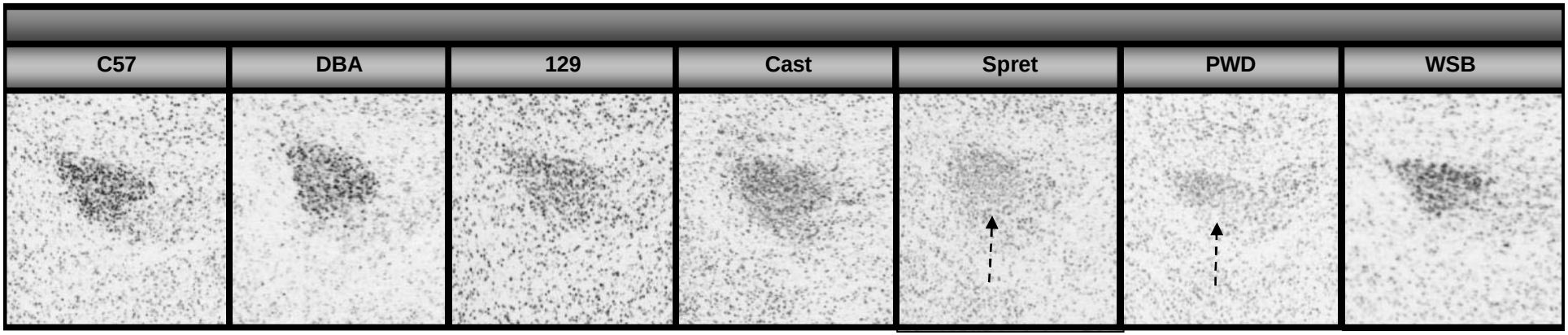
The WSB strain shows greater density and intensity of adrenergic receptor, type 2a (Adra2a) expression in the dentate gyrus, polymorph layer

Adra2a

CBX(gr): … < PWD

The PWD strain shows greater density and intensity of adrenergic receptor, type 2a (Adra2a) in the superficial portion of the cerebellar cortex granule layer

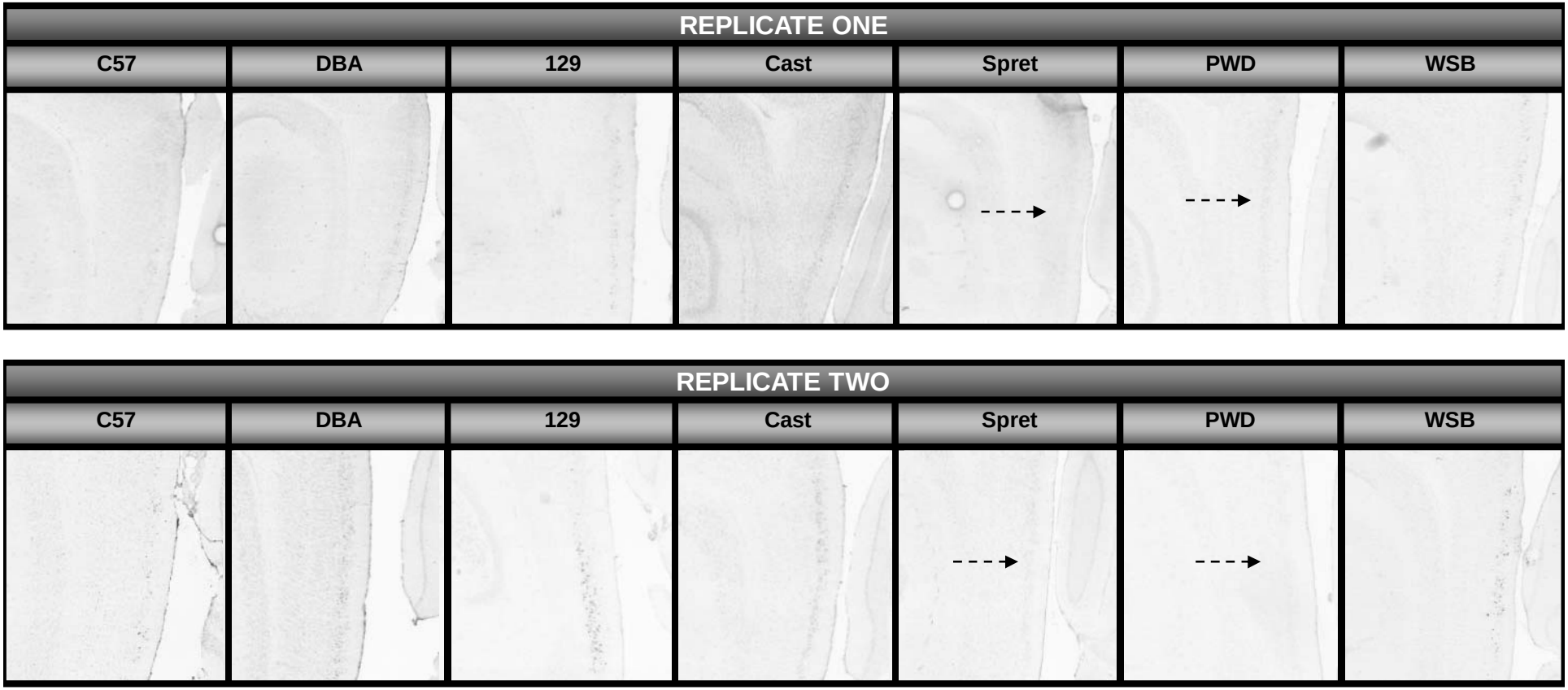
Agtr1a



PVH: Spret, PWD < …

The Spret and PWD strains show lower intensity of angiotensin II receptor, type 1a (Agtr1a) expression in the paraventricular hypothalamic nucleus

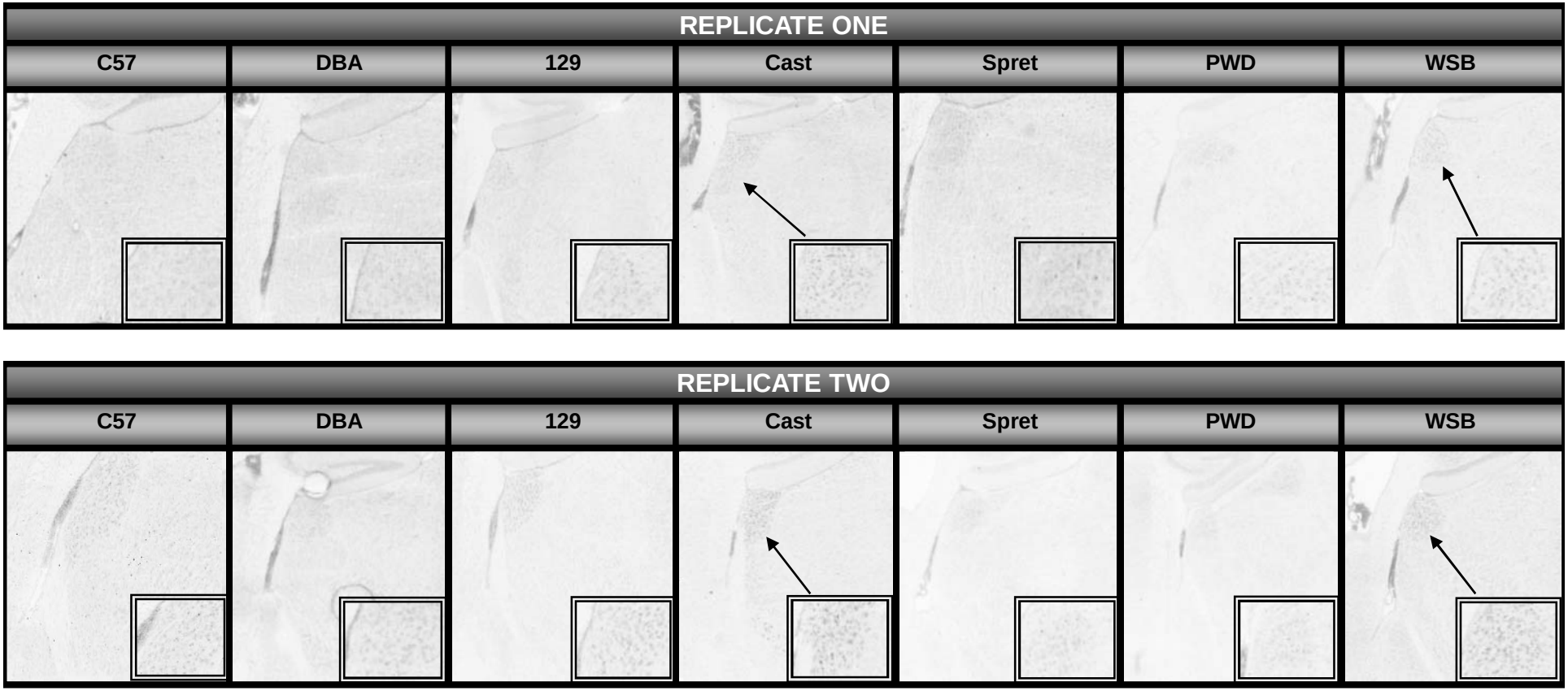
Bche



ENTm: Spret, PWD < …

The Spret and PWD strains show lower density and intensity of butyrylcholinesterase (Bche) expression in the entorhinal area, medial part, dorsal zone

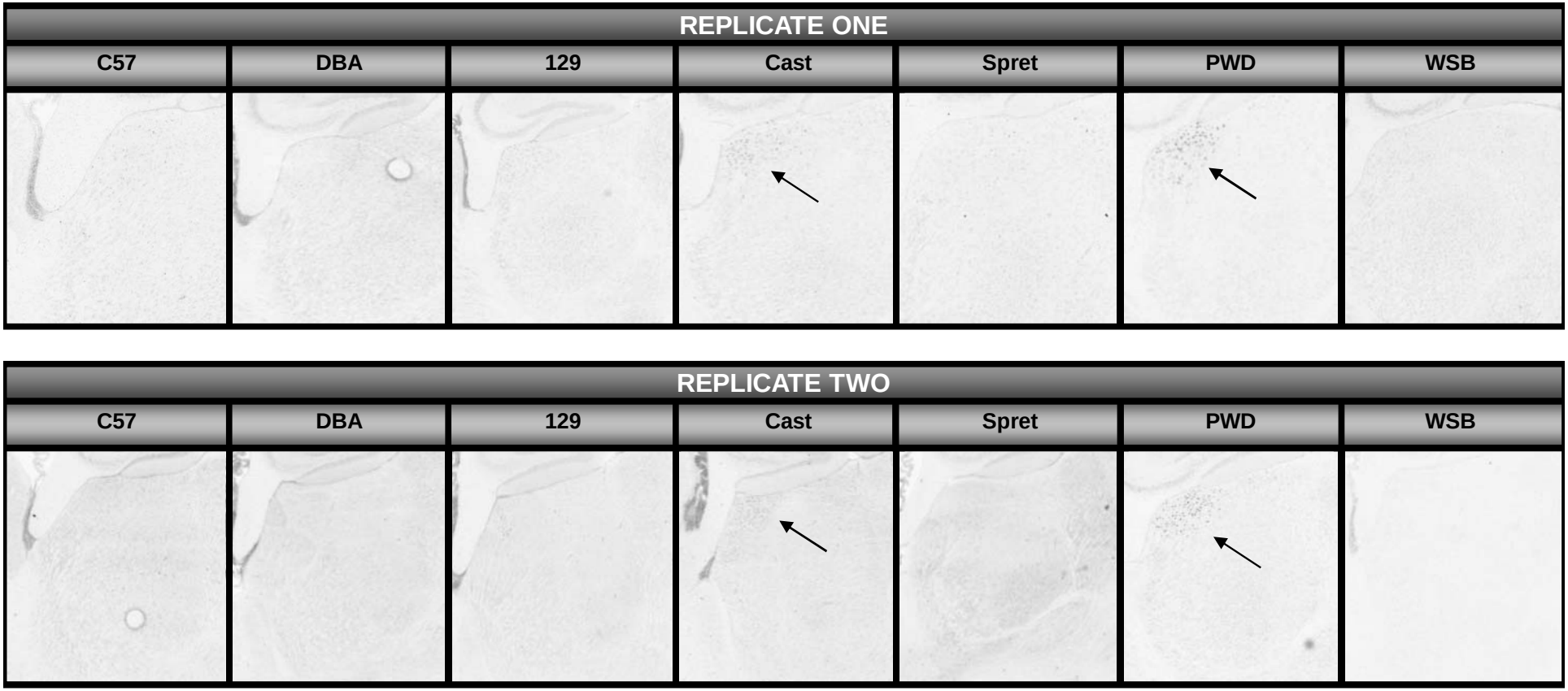
Bche



AD: … < Cast, WSB

The Cast and WSB strains show greater density and intensity of butyrylcholinesterase (Bche) expression in the anterodorsal nucleus

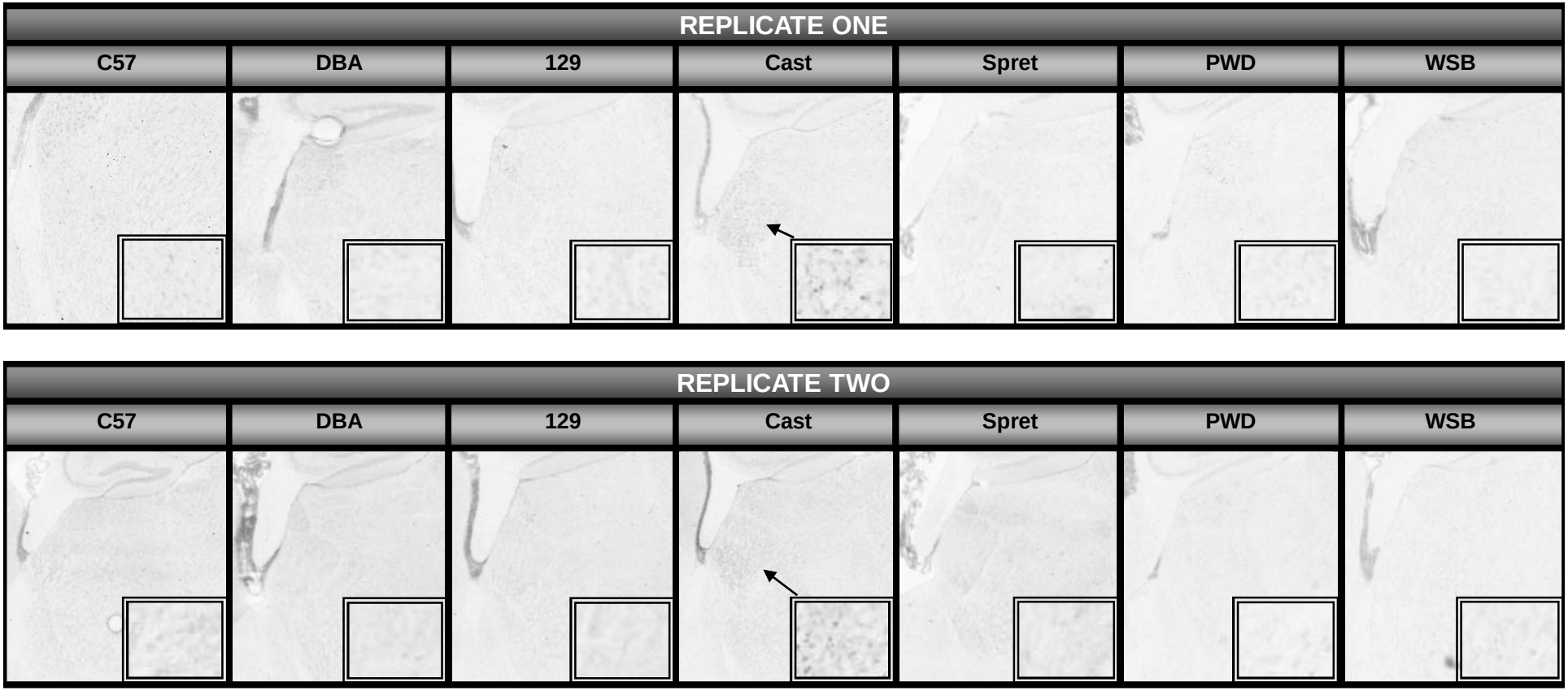
Bche



LD: … < Cast, PWD

The Cast and PWD strains show greater density and intensity of butyrylcholinesterase (Bche) expression in the lateral dorsal nucleus of thalamus

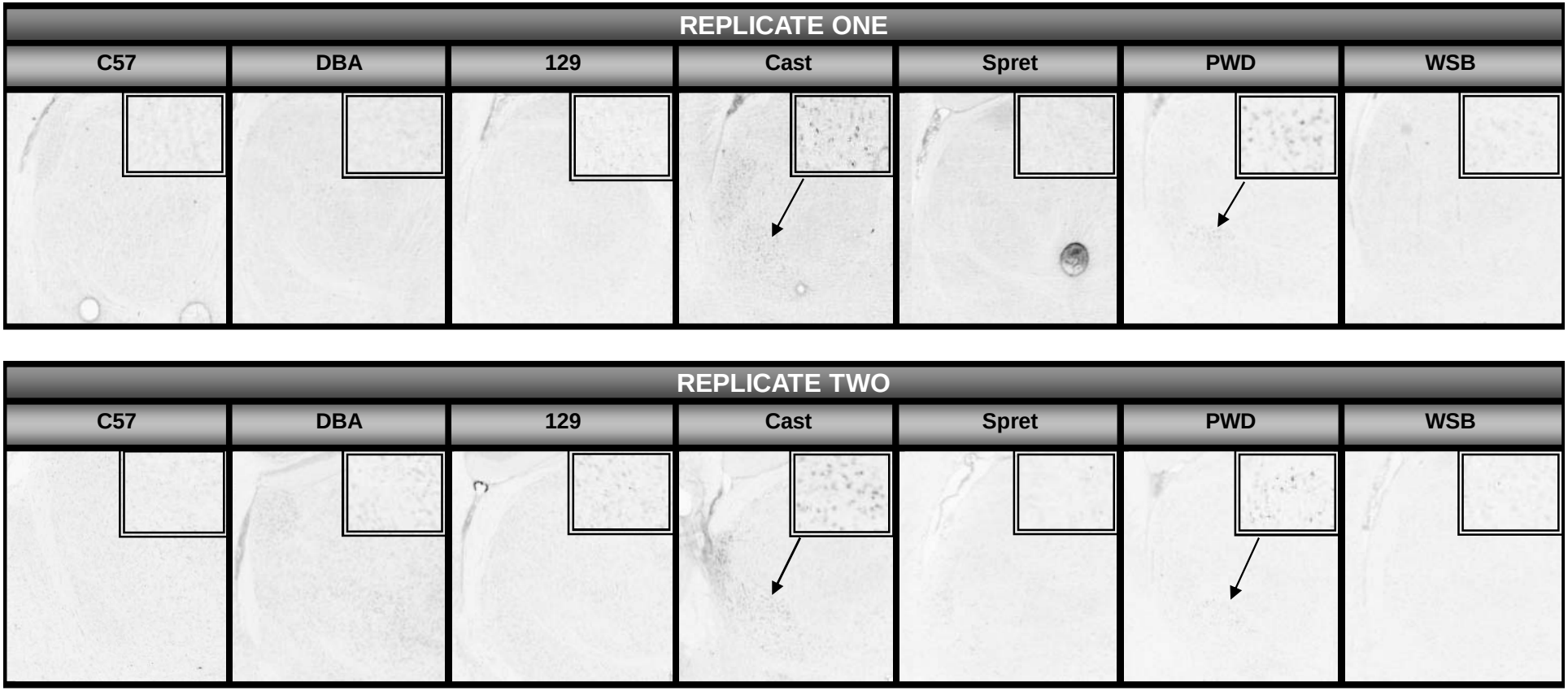
Bche



AV: … < Cast

The Cast strain shows greater density and intensity of butyrylcholinesterase (Bche) expression in the anteroventral nucleus of thalamus

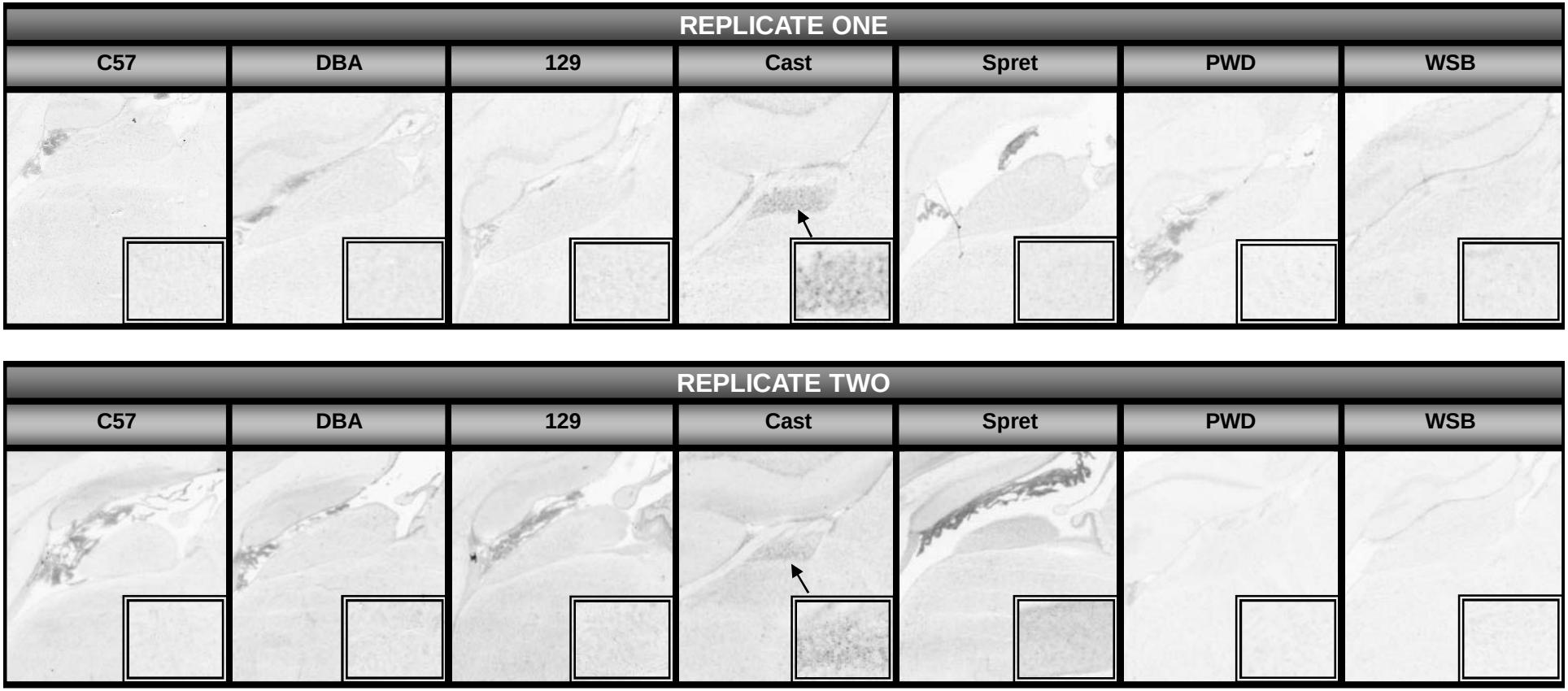
Bche



RE: … < Cast, PWD

The Cast and PWD strains show greater density and intensity of butyrylcholinesterase (Bche) expression in the nucleus of reunions

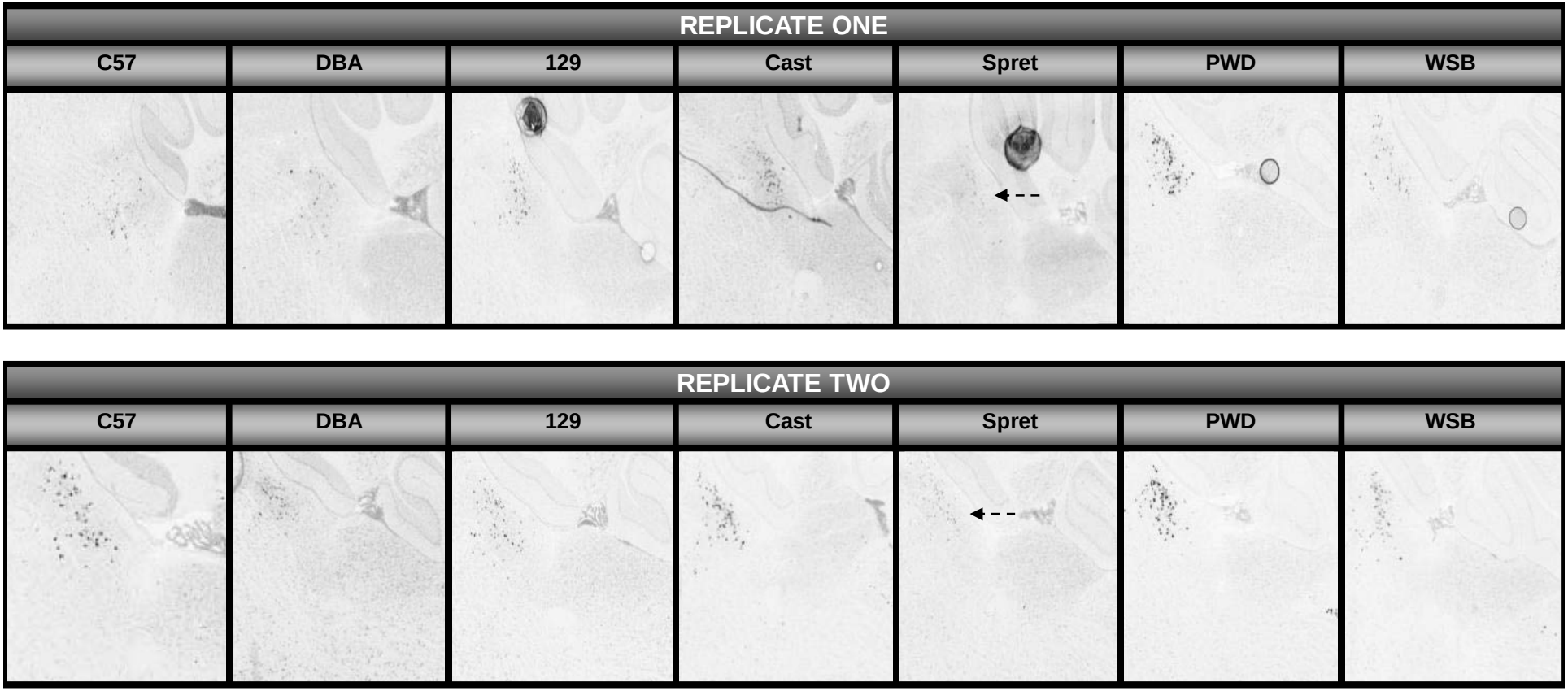
Bche



MH: … < Cast

The Cast strain shows greater density and intensity of butyrylcholinesterase (Bche) expression in the medial habenula

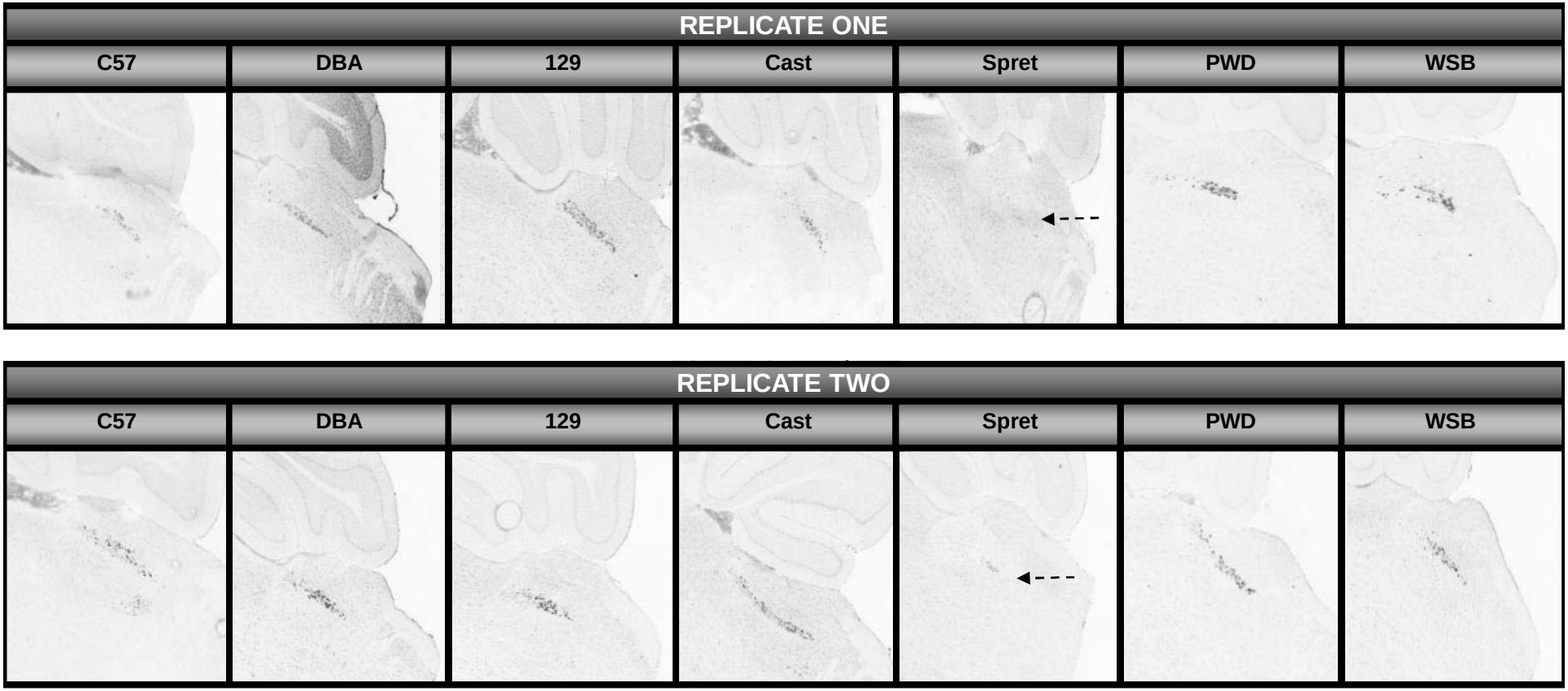
Bche



PCG: Spret < …

The Spret strain shows lower density and intensity of butyrylcholinesterase (Bche) expression in the pontine central gray

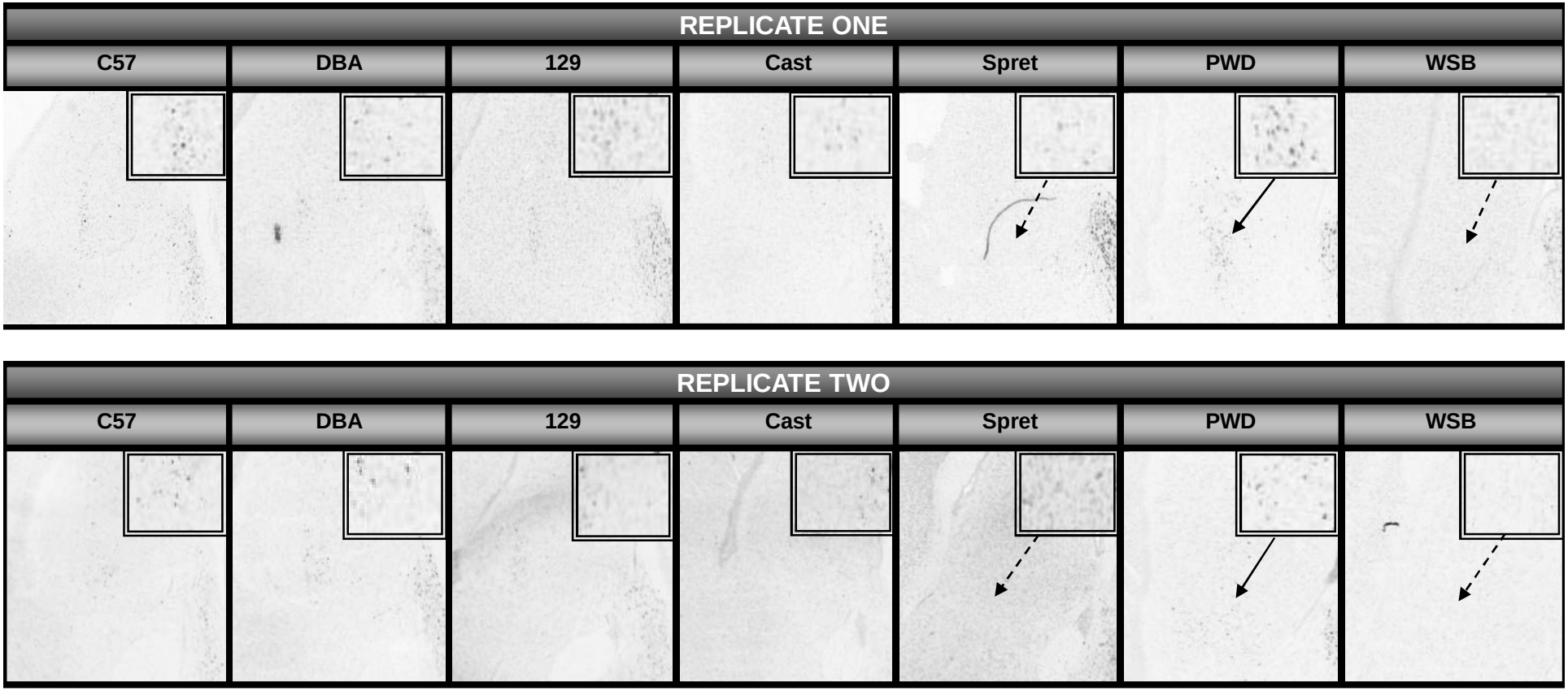
Bche



DMX: Spret < …

The Spret strain shows lower density and intensity of butyrylcholinesterase (Bche) expression in the dorsal motor nucleus of the vagus nerve

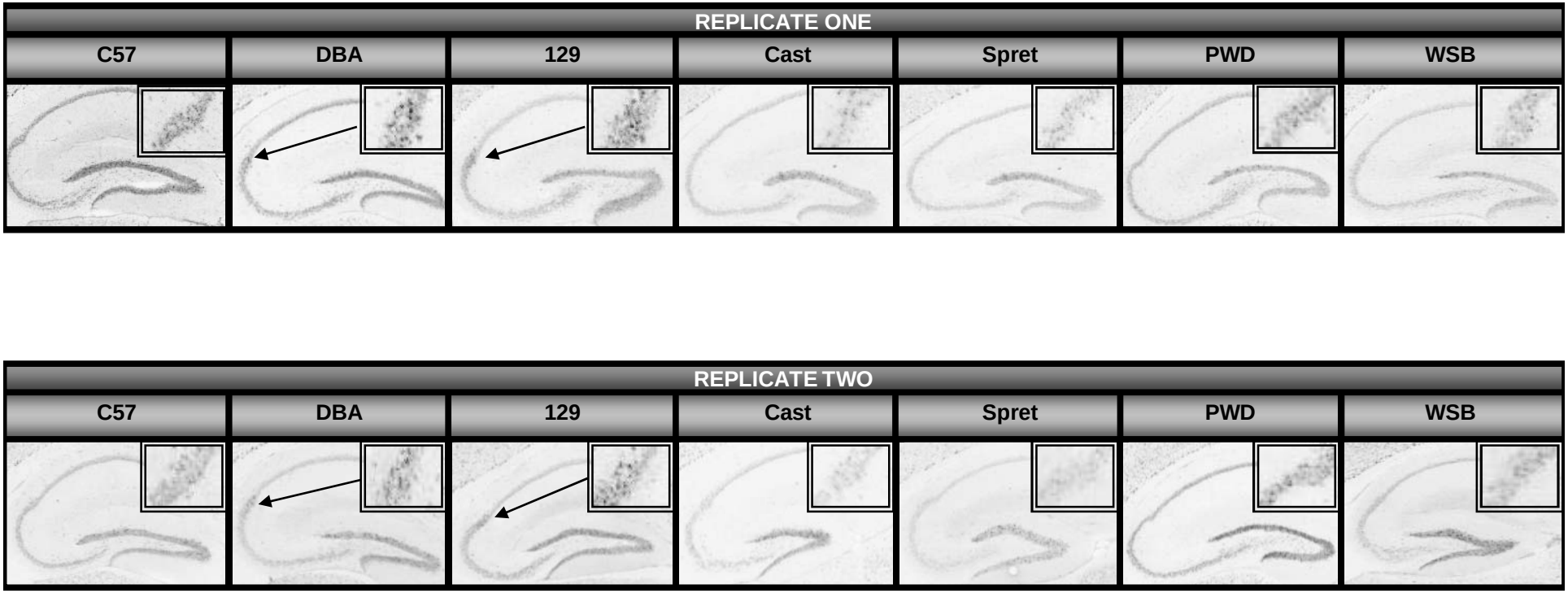
Cyp19a1



LS: Spret, WSB < … < PWD

The Spret and WSB strains show lower density and intensity of cytochrome P450, family 19, subfamily a, polypeptide 1 (Cyp19a1) expression in the lateral septal nucleus; the PWD strain shows greater.

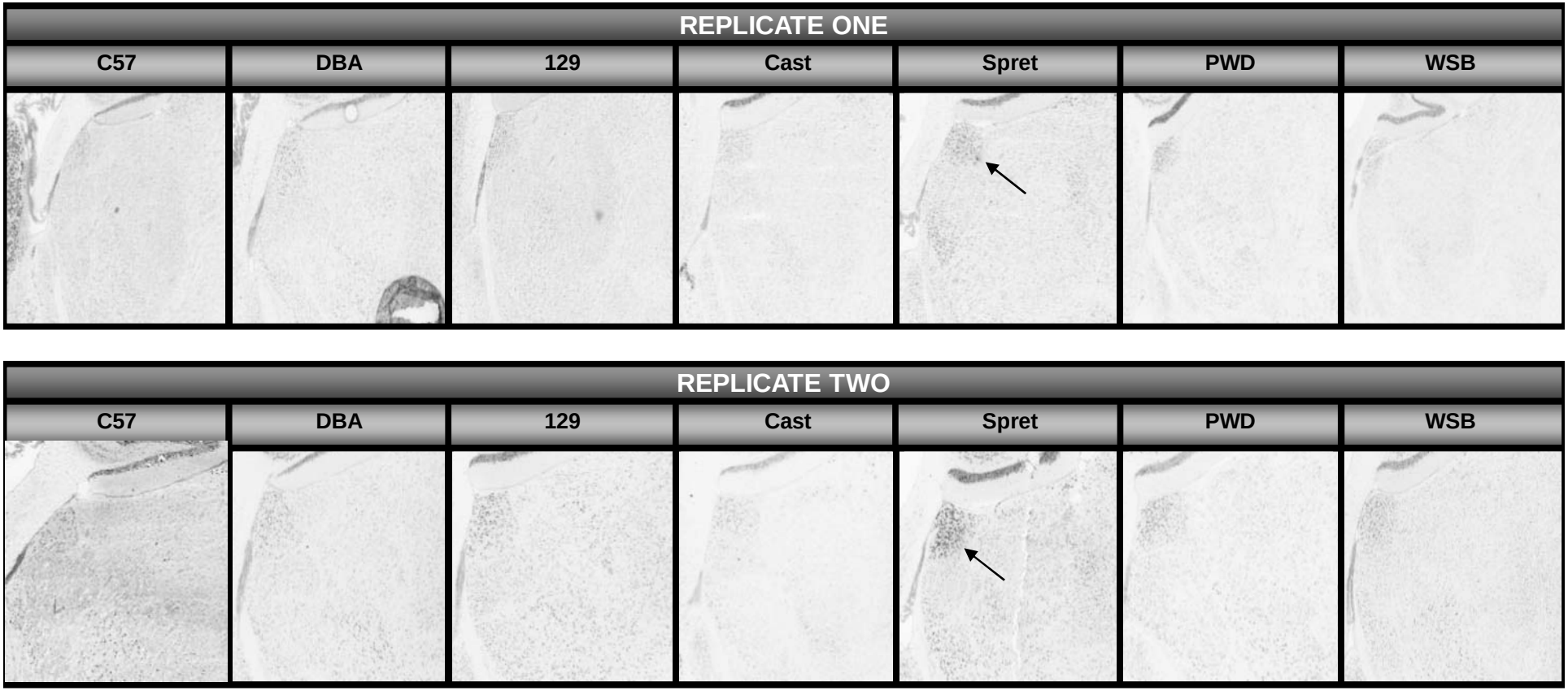
Drd1a



CA2sp: … < DBA, 129

The DBA and 129 strains show greater density and intensity of dopamine receptor D1A (Drd1a) expression in the cornu ammonis field 2, pyramidal layer

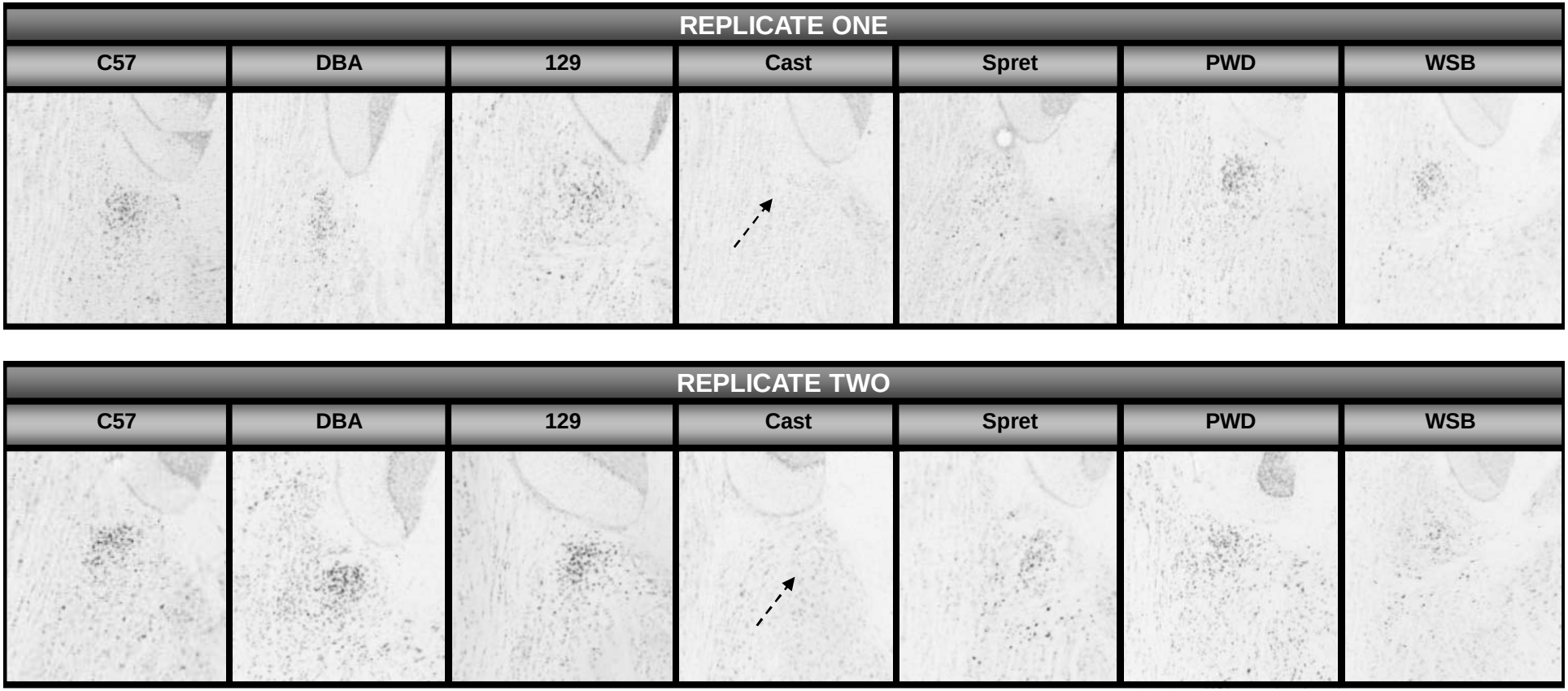
Drd1a



AD: … < Spret

The Spret strain shows greater density and intensity of dopamine receptor D1A (Drd1a) expression in the anterodorsal

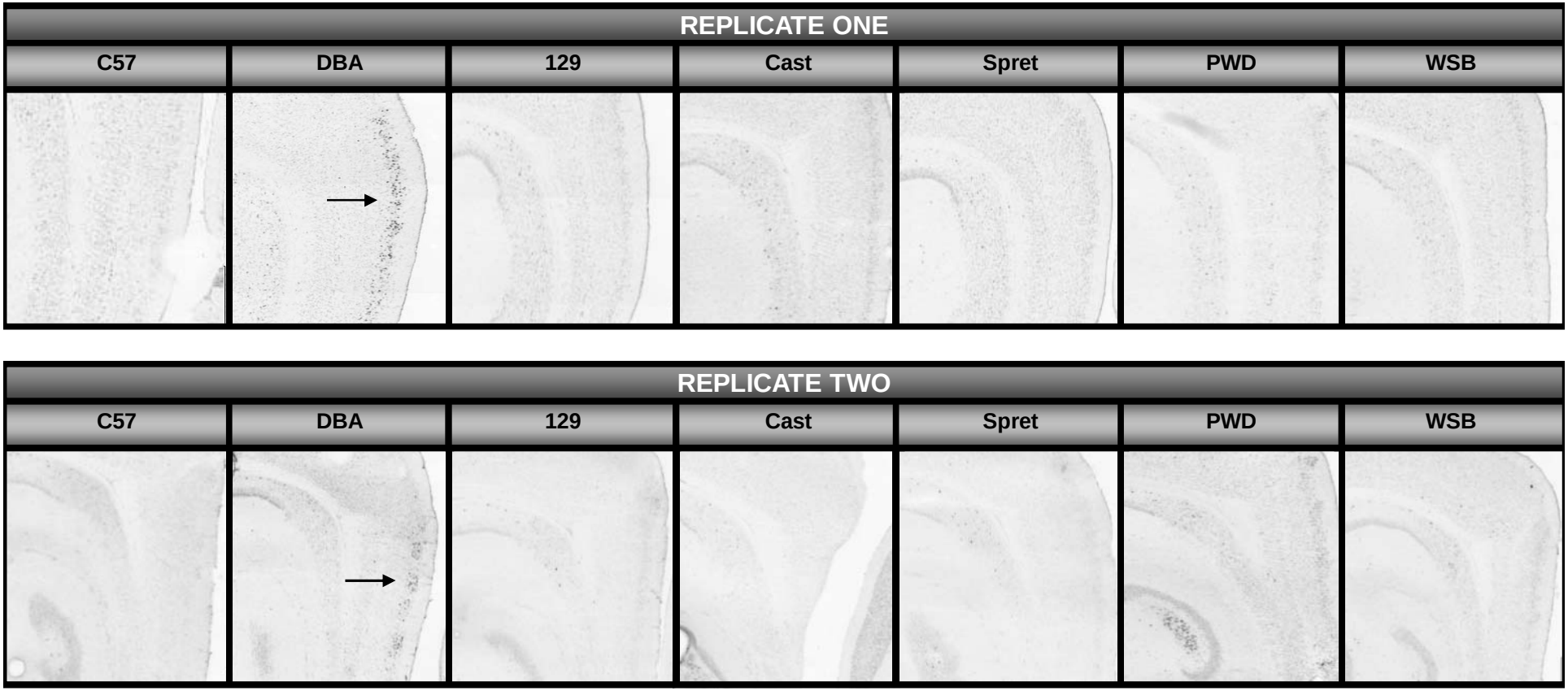
Drd1a



PB: Cast < …

The Cast strain shows lower density and intensity of dopamine receptor D1A (Drd1a) expression in the parabrachial nucleus

Drd2

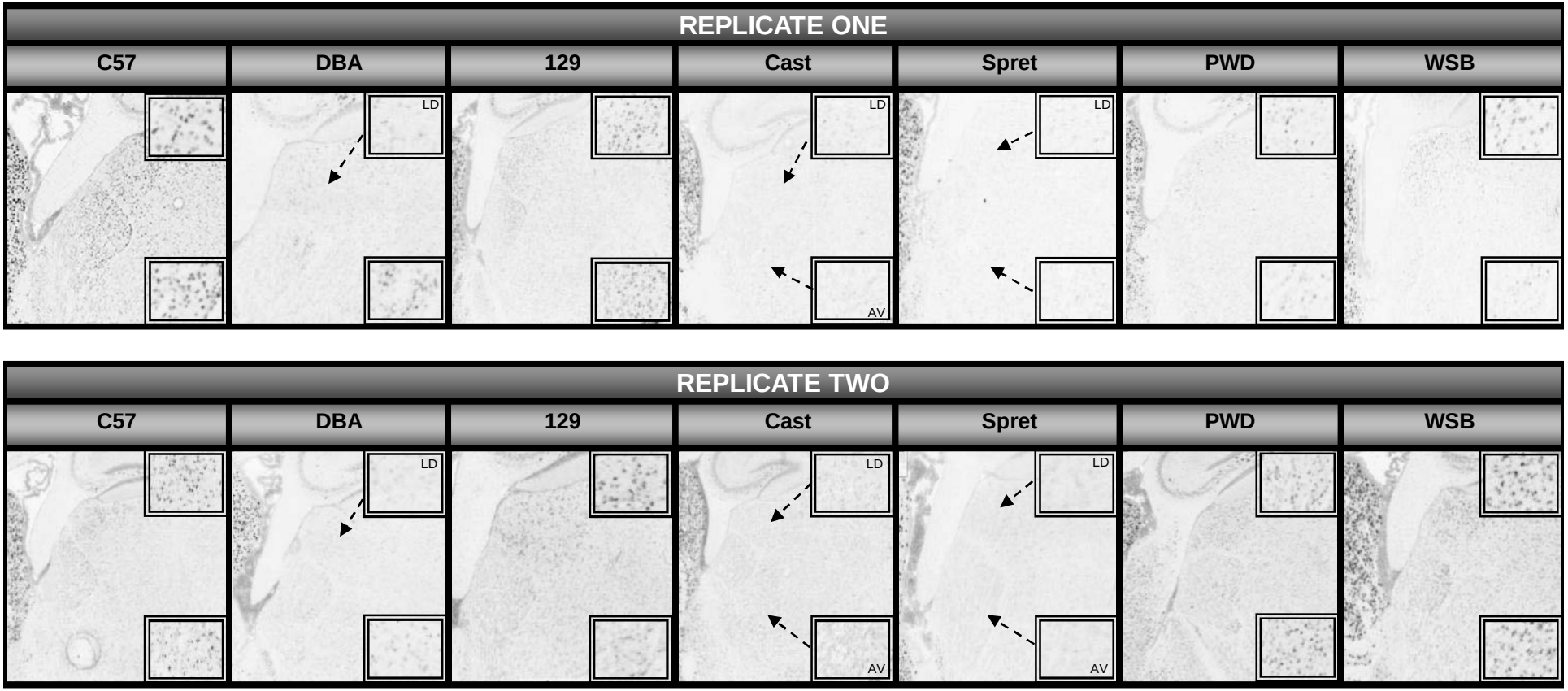


ENTl: … < DBA

The DBA strain shows greater density and intensity of dopamine receptor 2 (Drd2) expression in the entorhinal area, lateral part

20a,b

Drd2

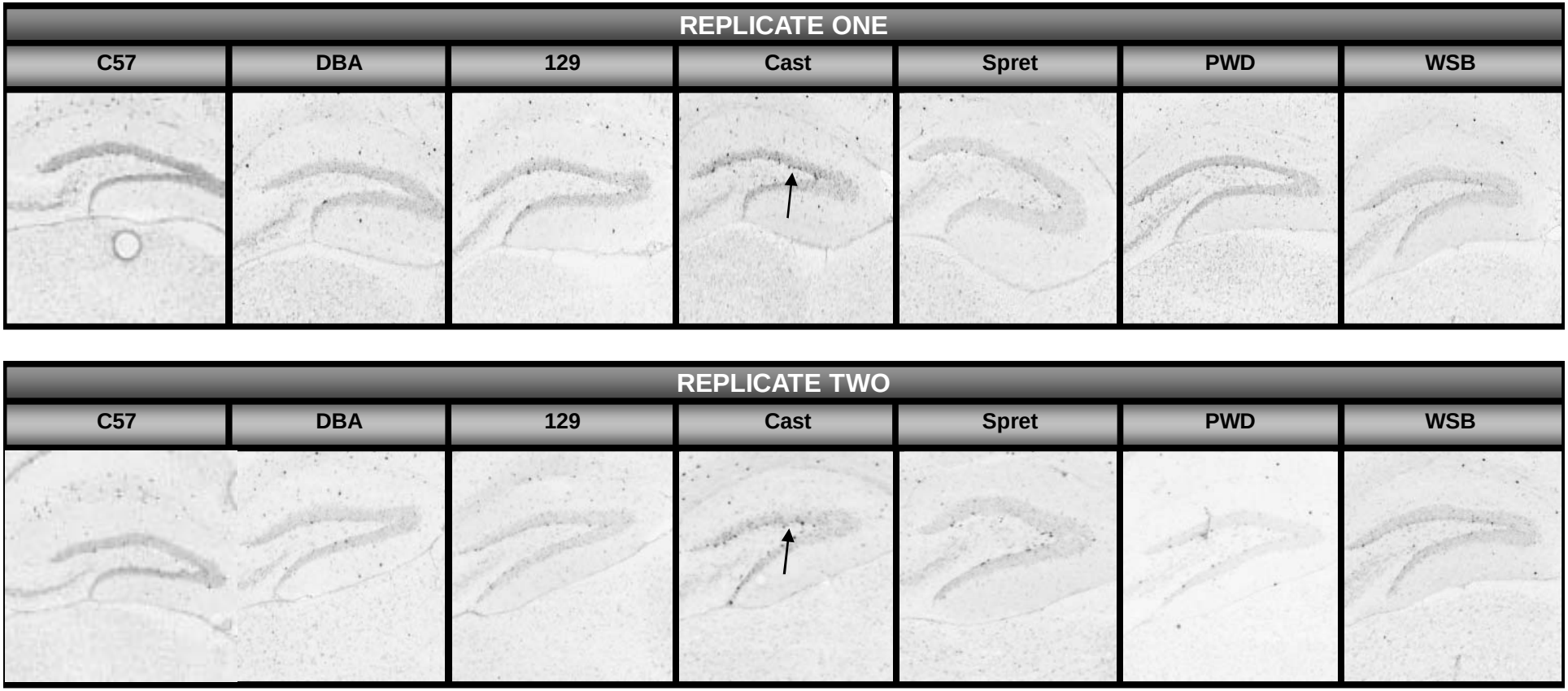


LD: DBA, Cast, Spret < …

AV: Cast, Spret < …

The DBA, Cast and Spret strains show lower density and intensity of dopamine receptor 2 (Drd2) expression in the lateral dorsal nucleus of thalamus; the Cast and Spret show lower density and intensity of expression in the anteroventral nucleus of thalamus

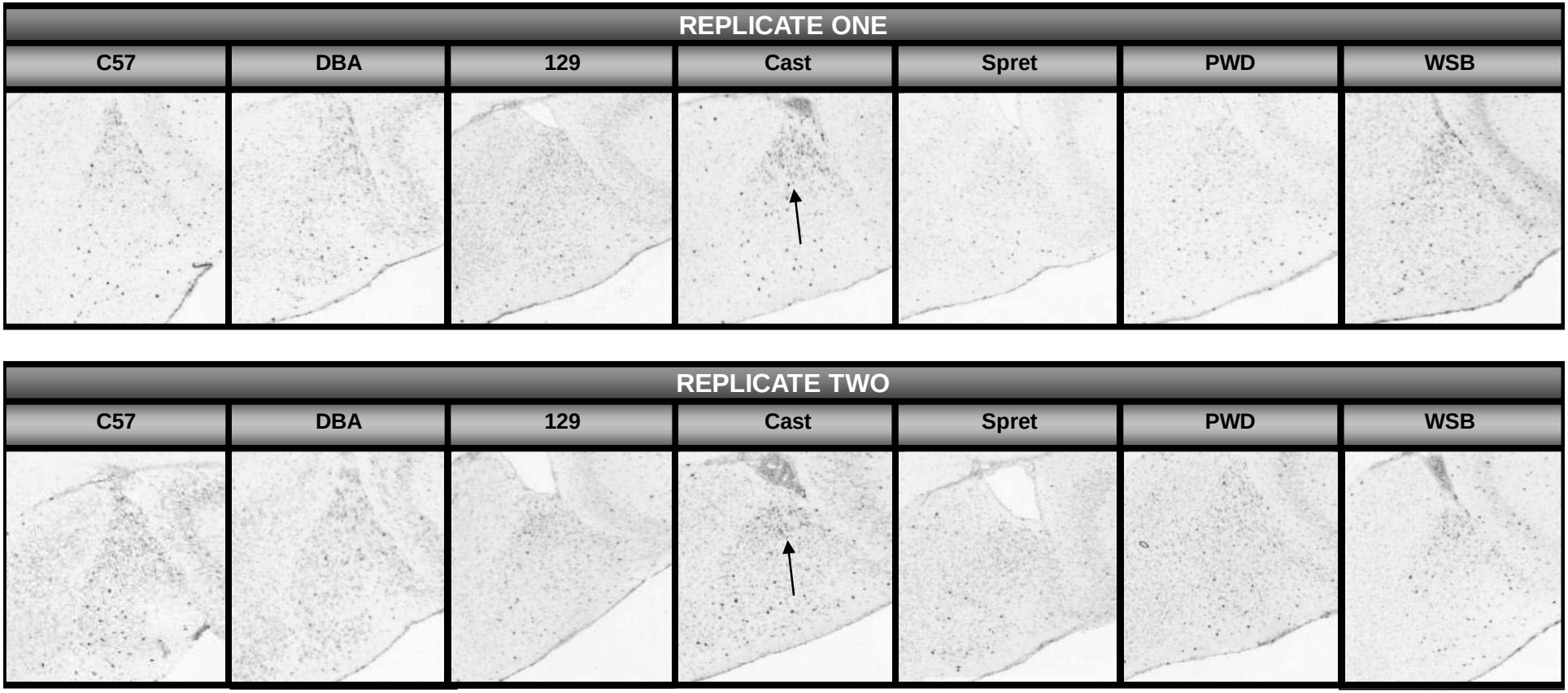
Egfr



DG(sg): … < Cast

The Cast strain shows greater density and intensity of epidermal growth factor receptor (Egfr) expression in the dentate gyrus, subgranular zone

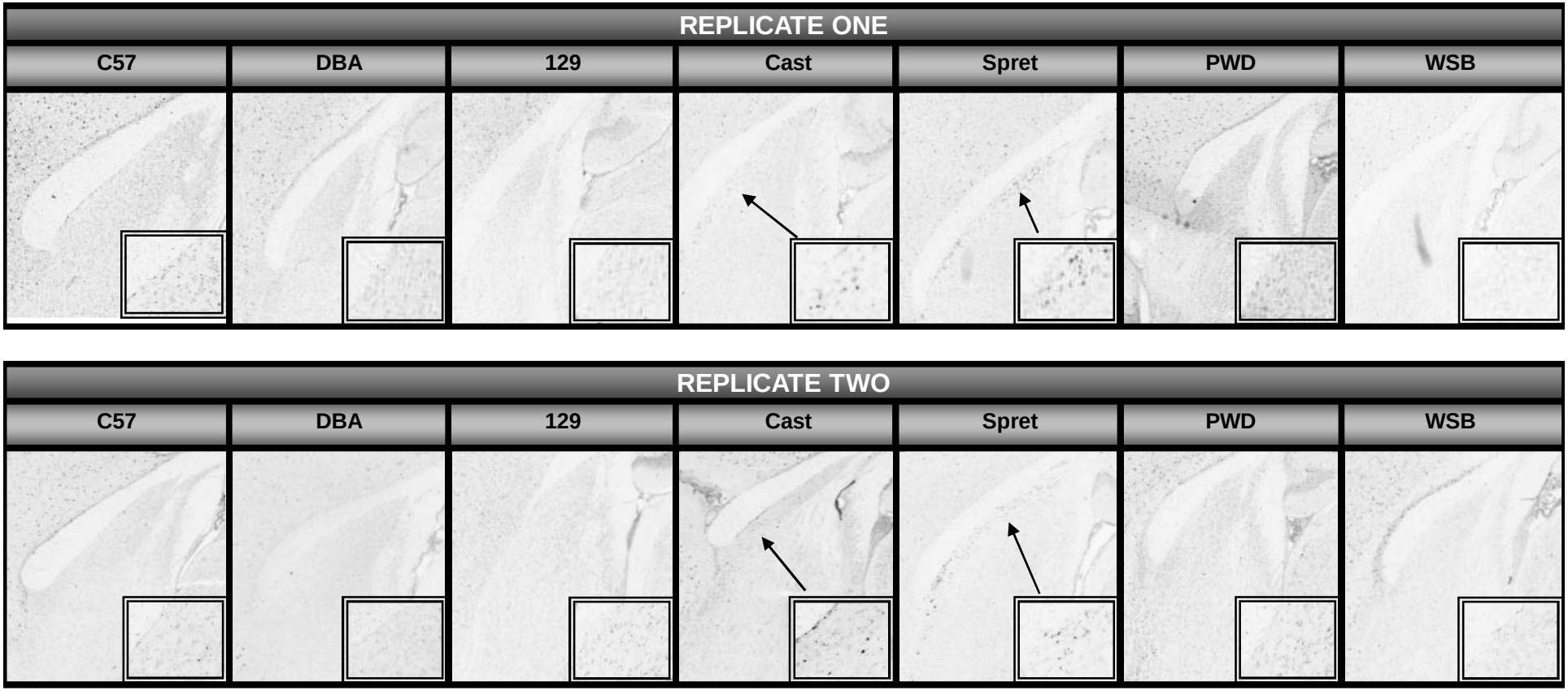
Egfr



PA: … < Cast

The Cast strain shows greater density and intensity of epidermal growth factor receptor (Egfr) expression in the posterior amygdalar nucleus

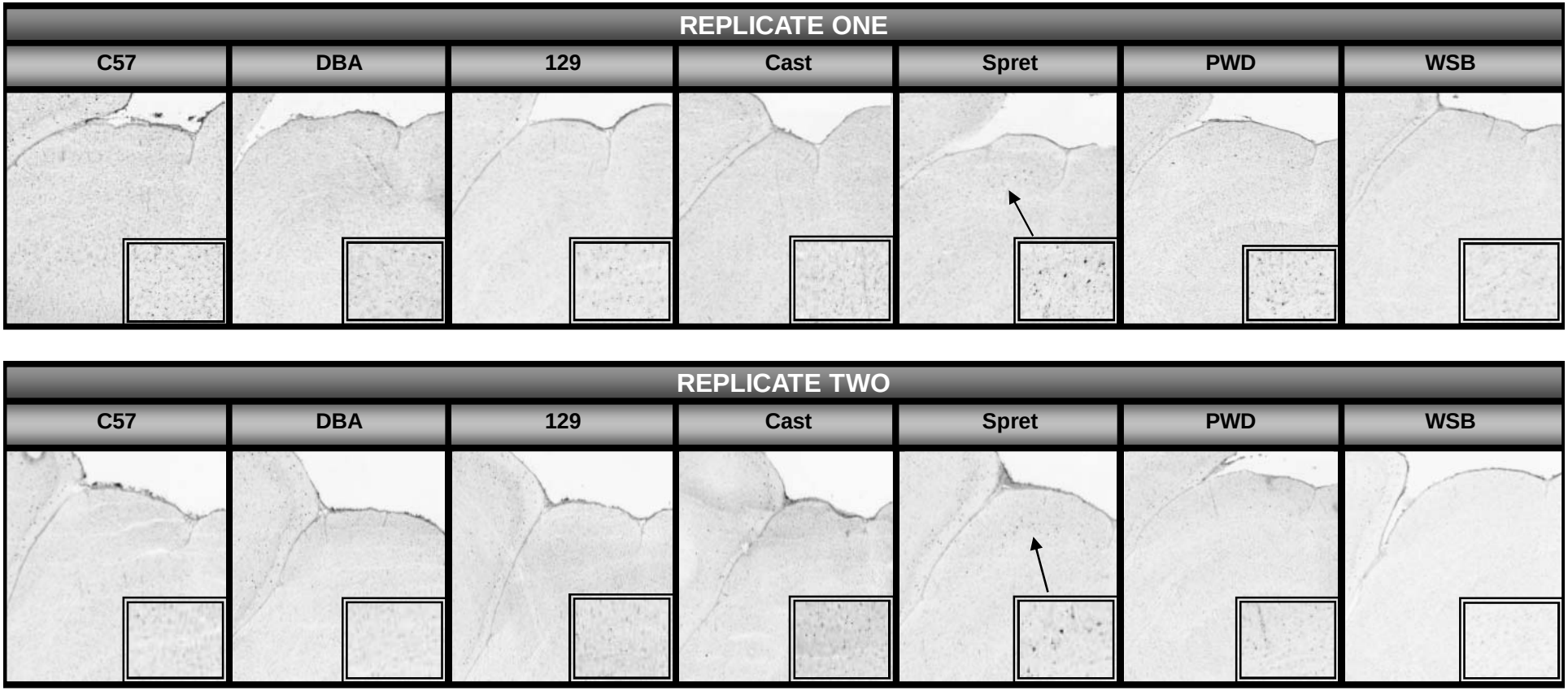
Egfr



LSc: … < Cast, Spret

The Cast and Spret strains show greater density and intensity of epidermal growth factor receptor (Egfr) expression in the lateral septal nucleus, caudal part

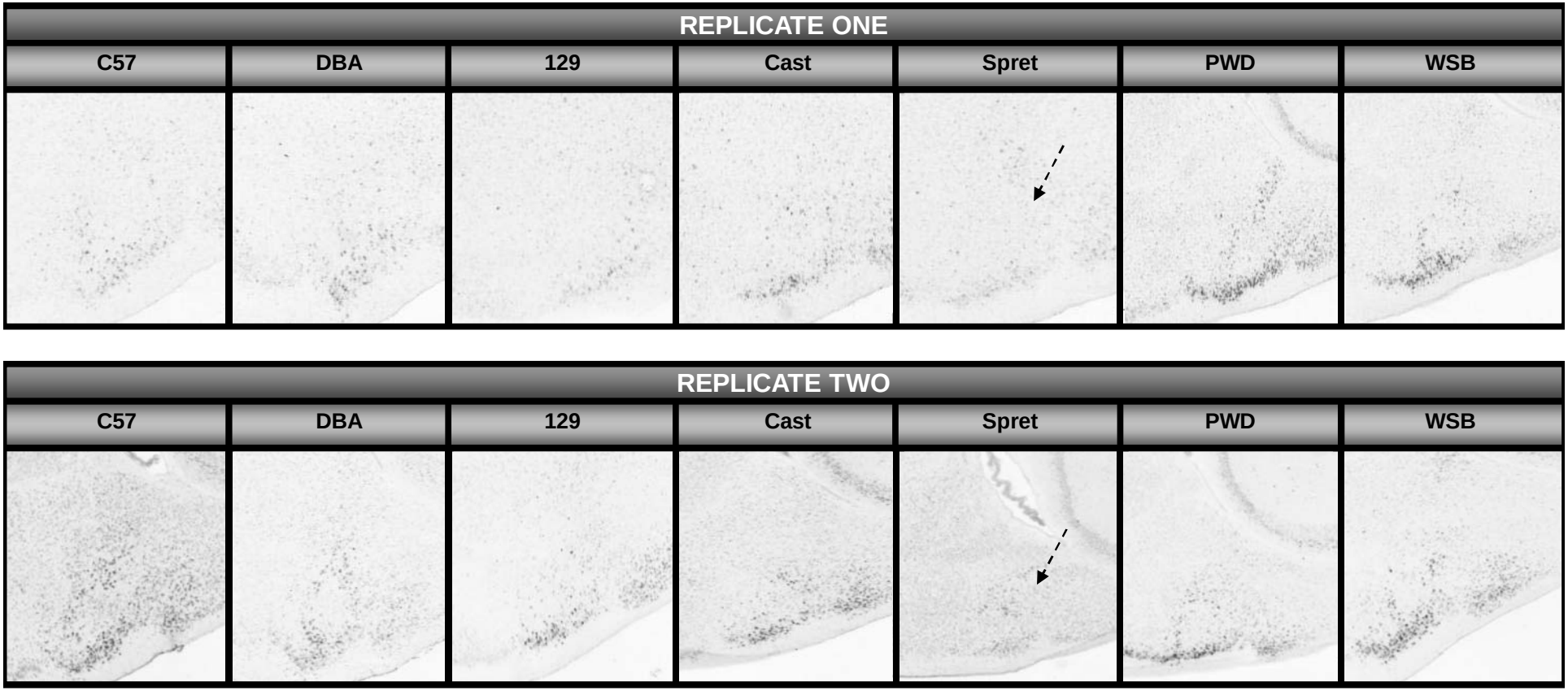
Egfr



SCs: … < Spret

The Spret strain shows greater density and intensity of epidermal growth factor receptor (Egfr) expression in the superior colliculus, sensory part

Esr1

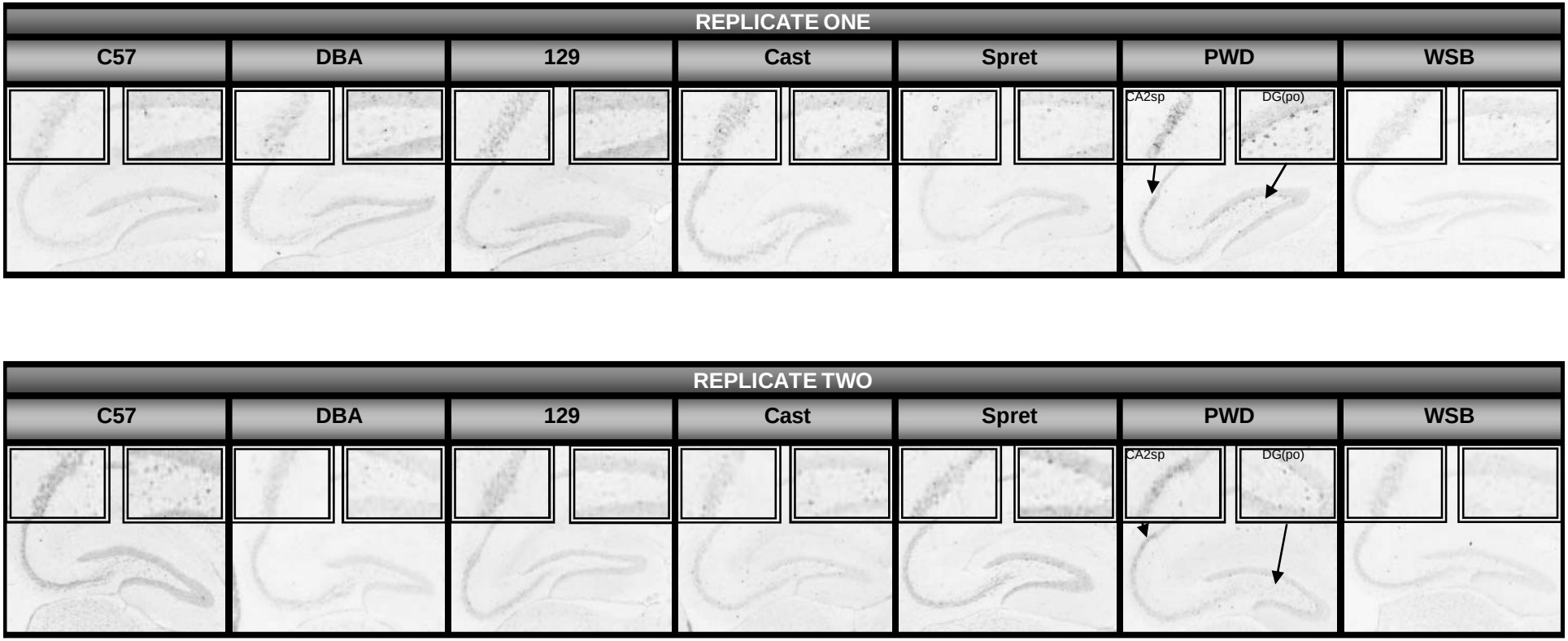


COAp: Spret < …

The Spret strain shows lower density of estrogen receptor alpha (Esr1) expression in the cortical amygdalar area, posterior part

26a,b

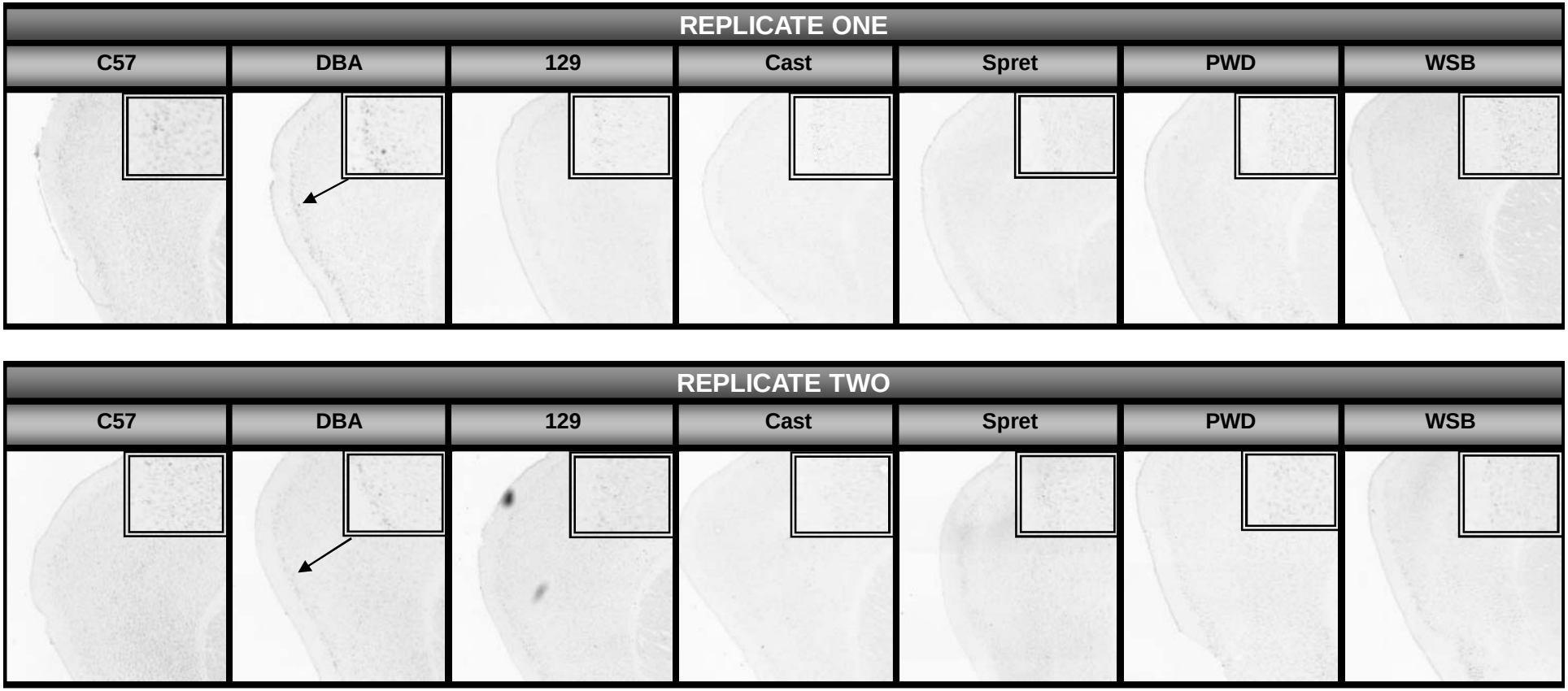
Esr1



CA2sp, DG(po): … < PWD

The PWD strain shows greater density and intensity of estrogen receptor alpha (Esr1) expression in the cornu ammonis field 2, pyramidal layer and dentate gyrus, polymorph layer

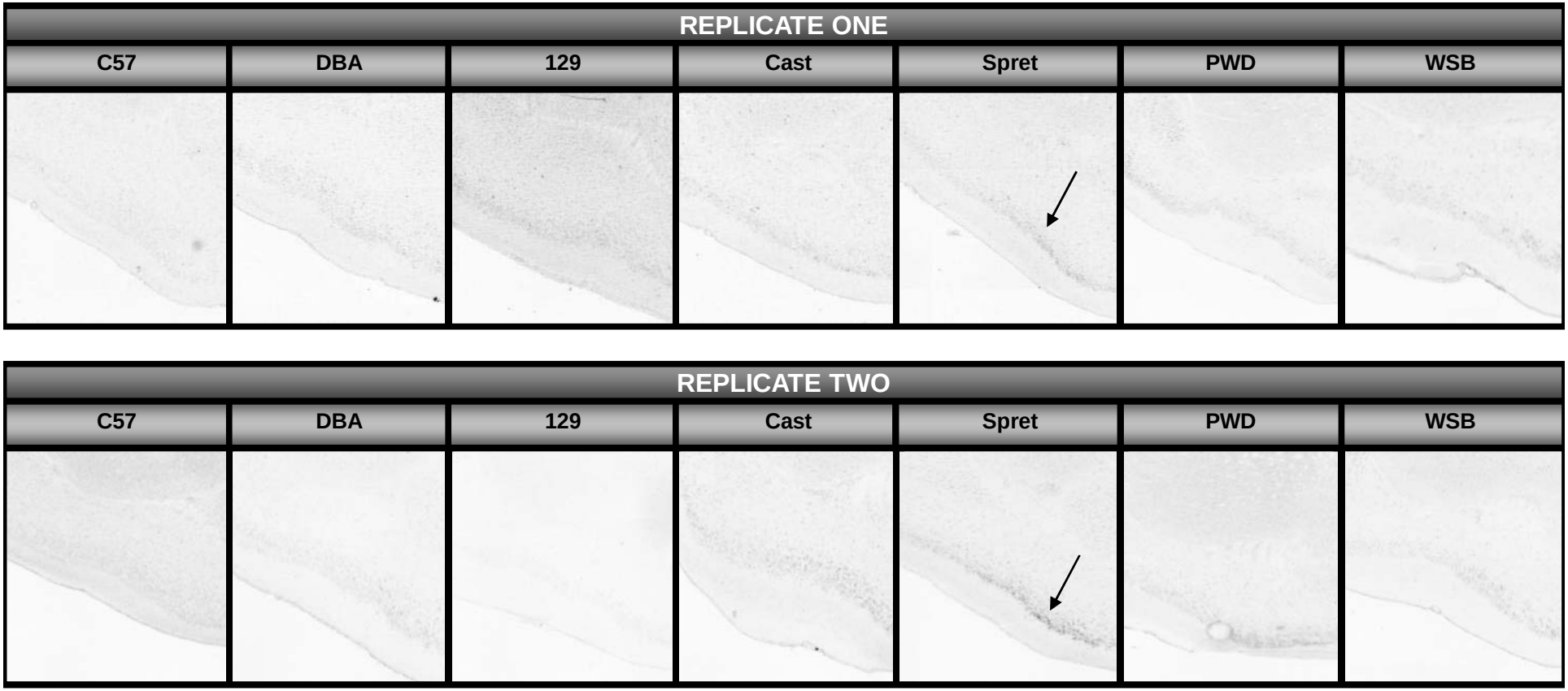
Esr1



MO(2/3): … < DBA

The DBA strain shows greater density and intensity of estrogen receptor alpha (Esr1) expression in the superficial portion of layer 2/3 of the motor cortex

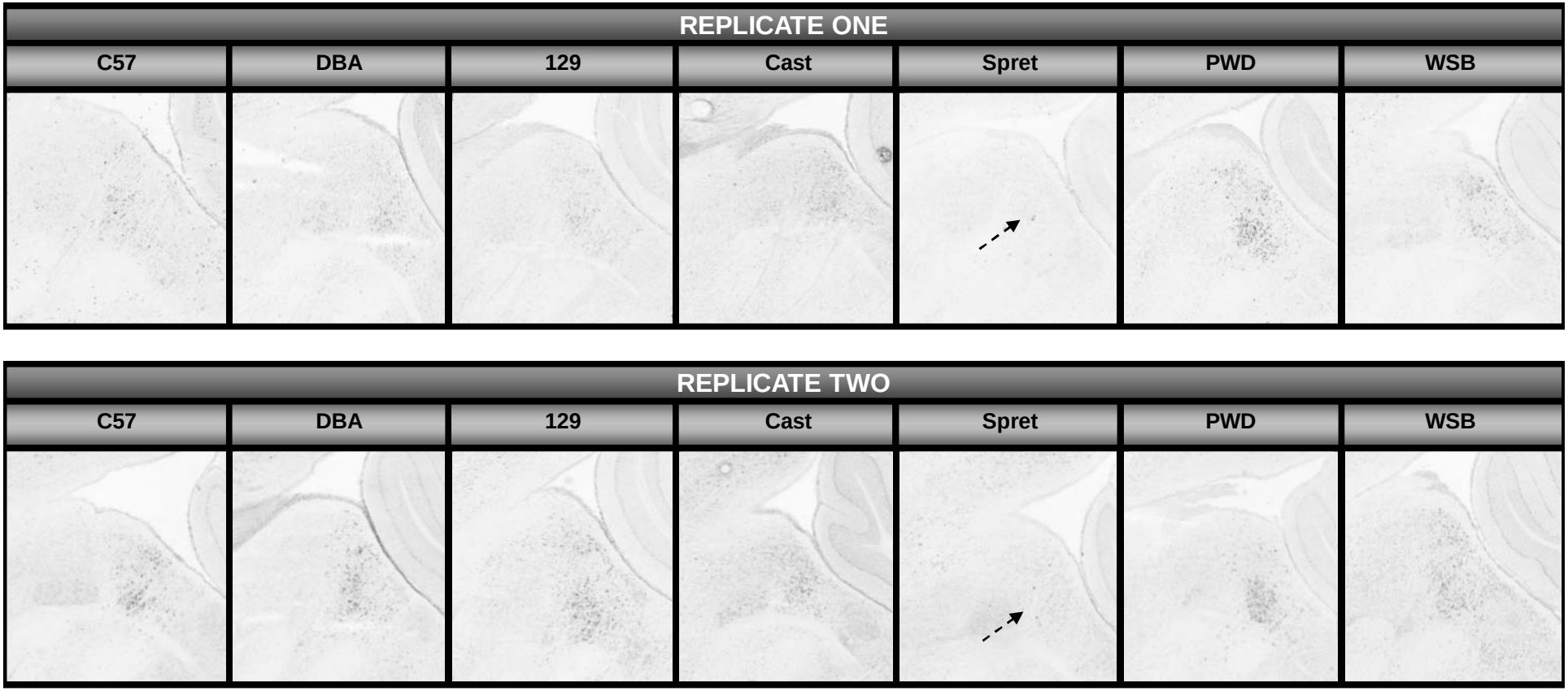
Esr1



PIR(2): … < Spret

The Spret strain shows greater density and intensity of estrogen receptor alpha (Esr1) expression in the piriform area, pyramidal layer

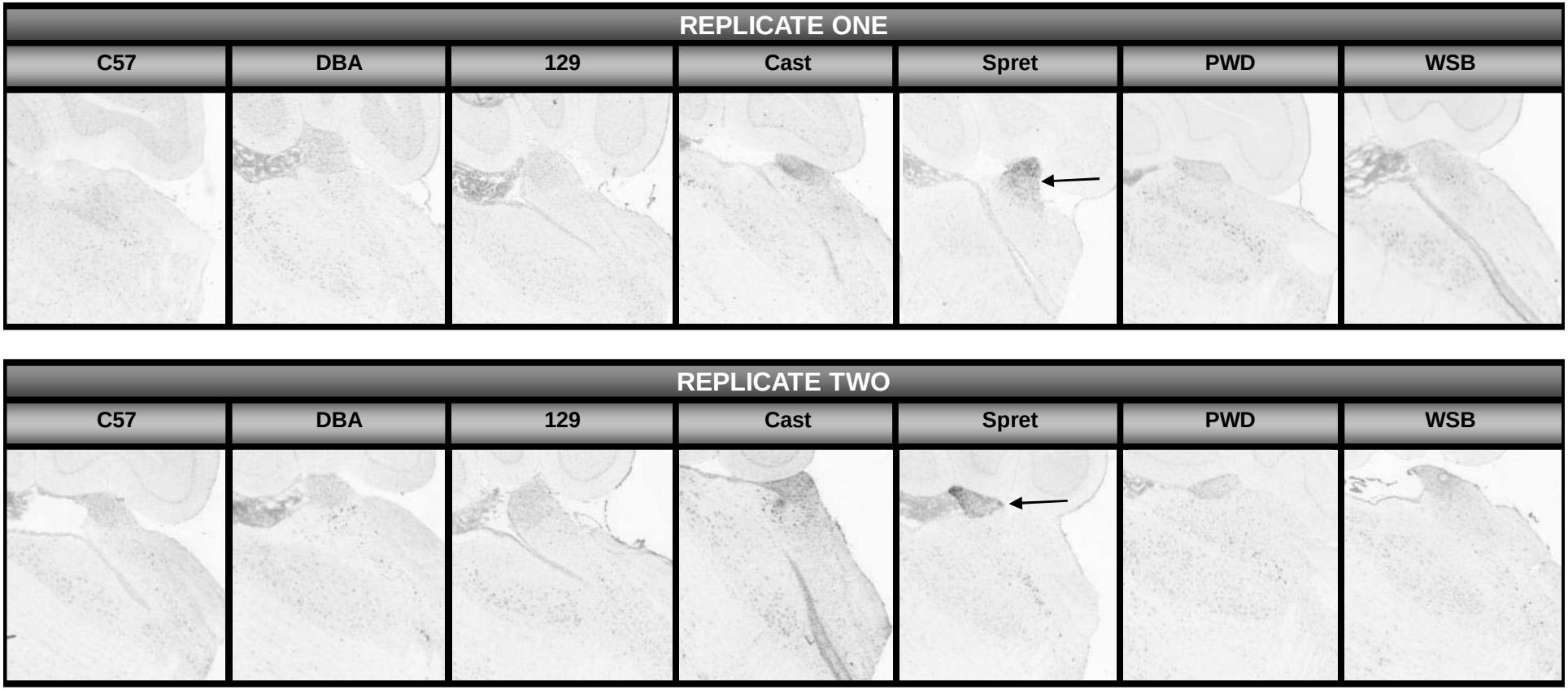
Esr1



DR: Spret < …

The Spret strain shows lower density and intensity of estrogen receptor alpha (Esr1) expression in the dorsal nucleus raphé

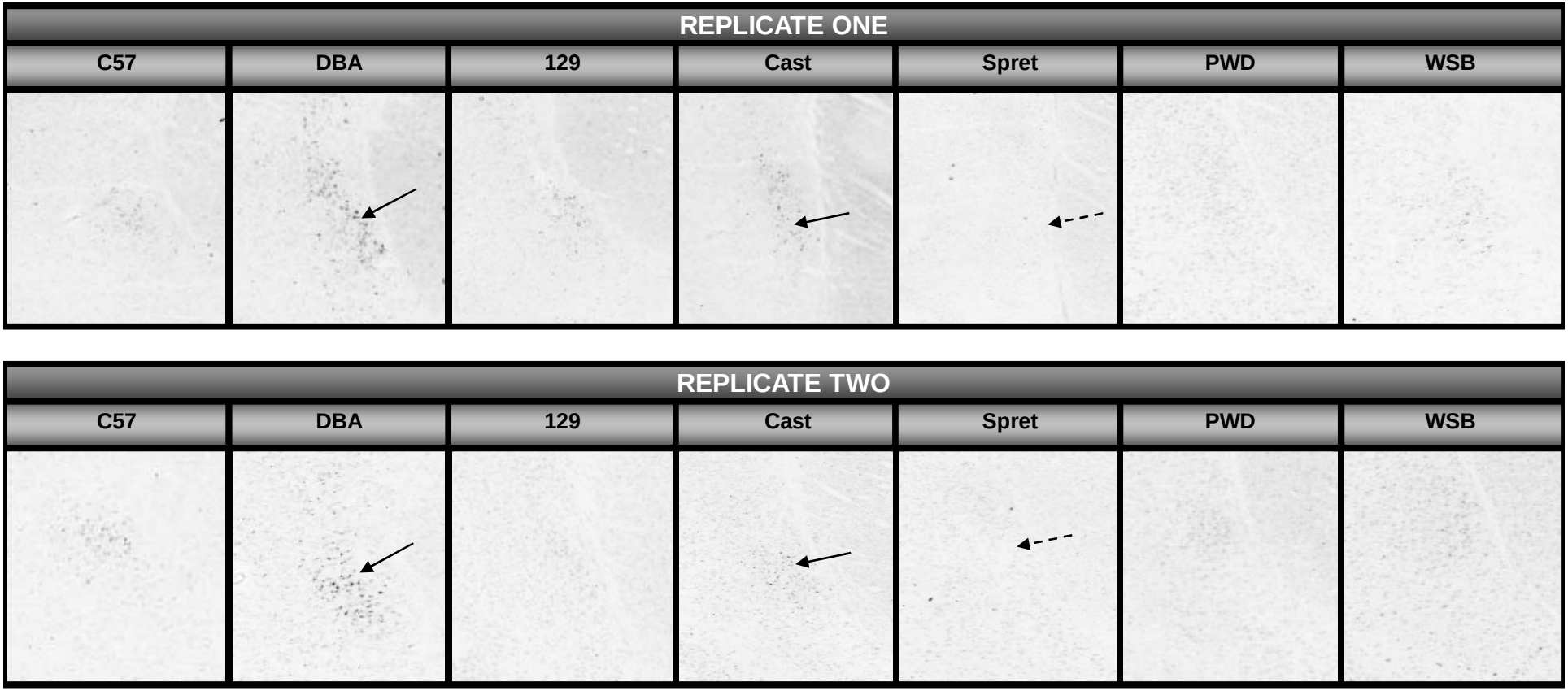
Esr1



AP: … < Spret

The Spret strain shows greater density and intensity of estrogen receptor alpha (Esr1) expression in the area postrema

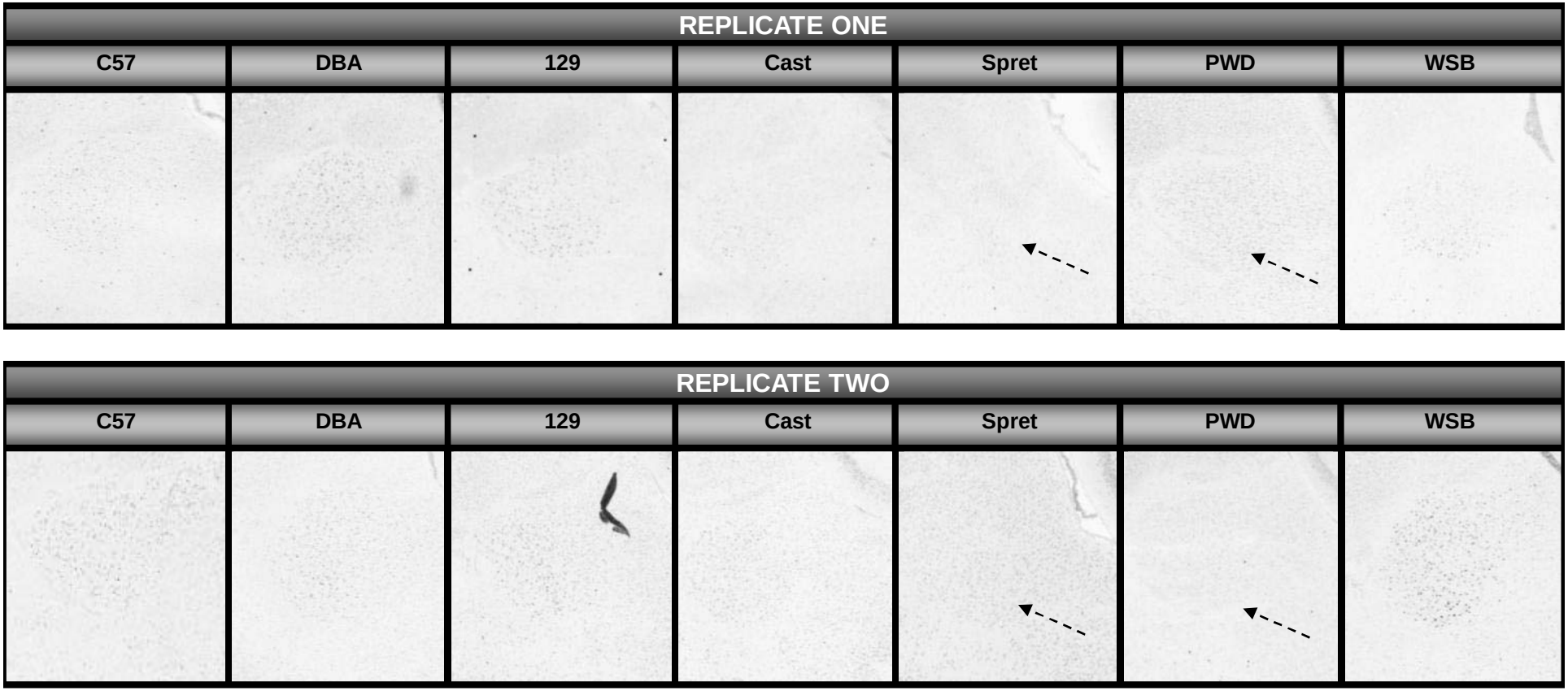
Esr2



CLA: Spret < … < DBA, Cast

The Spret strain shows lower density and intensity of estrogen receptor beta (Esr2) expression in the claustrum; the DBA and Cast strains show greater

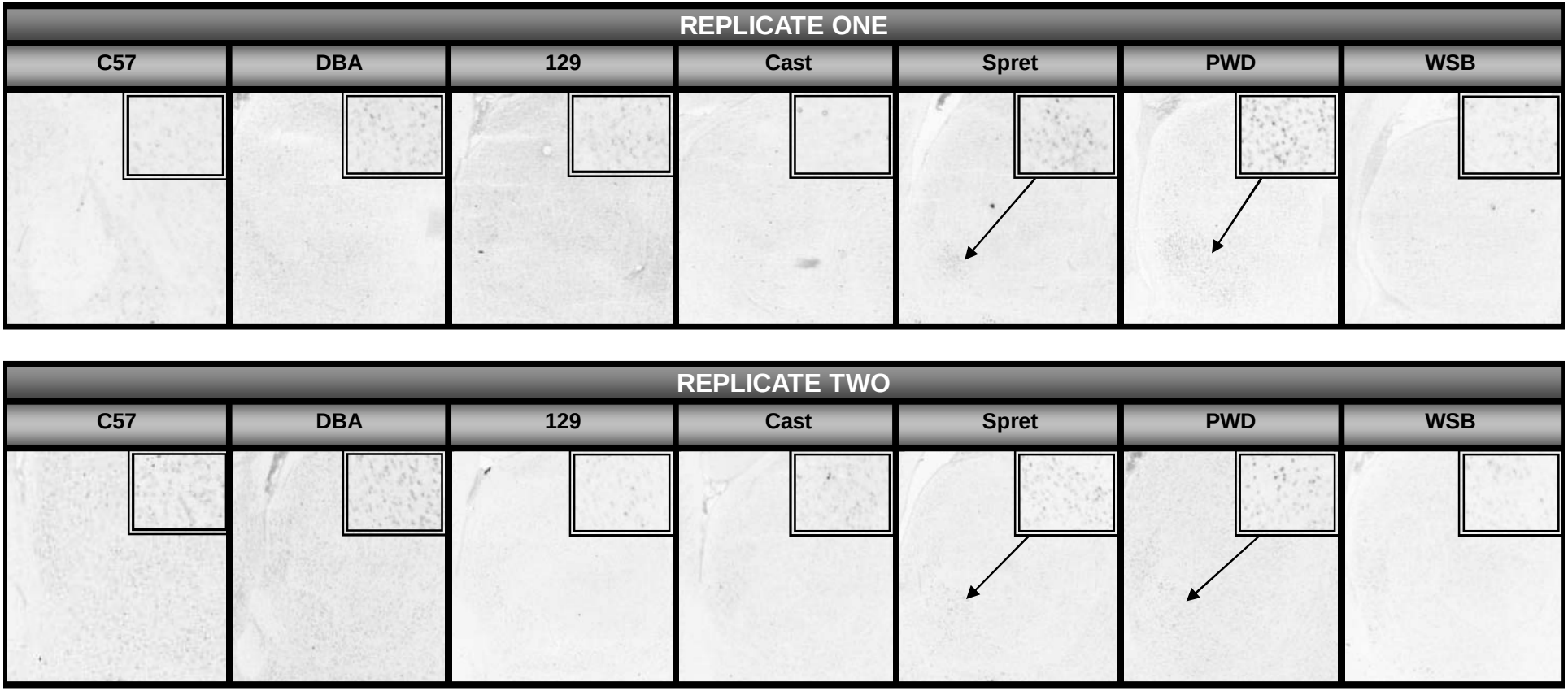
Esr2



BLA: Spret, PWD < …

The Spret and PWD strains show lower density and intensity of estrogen receptor beta (Esr2) expression in the basolateral amygdalar nucleus

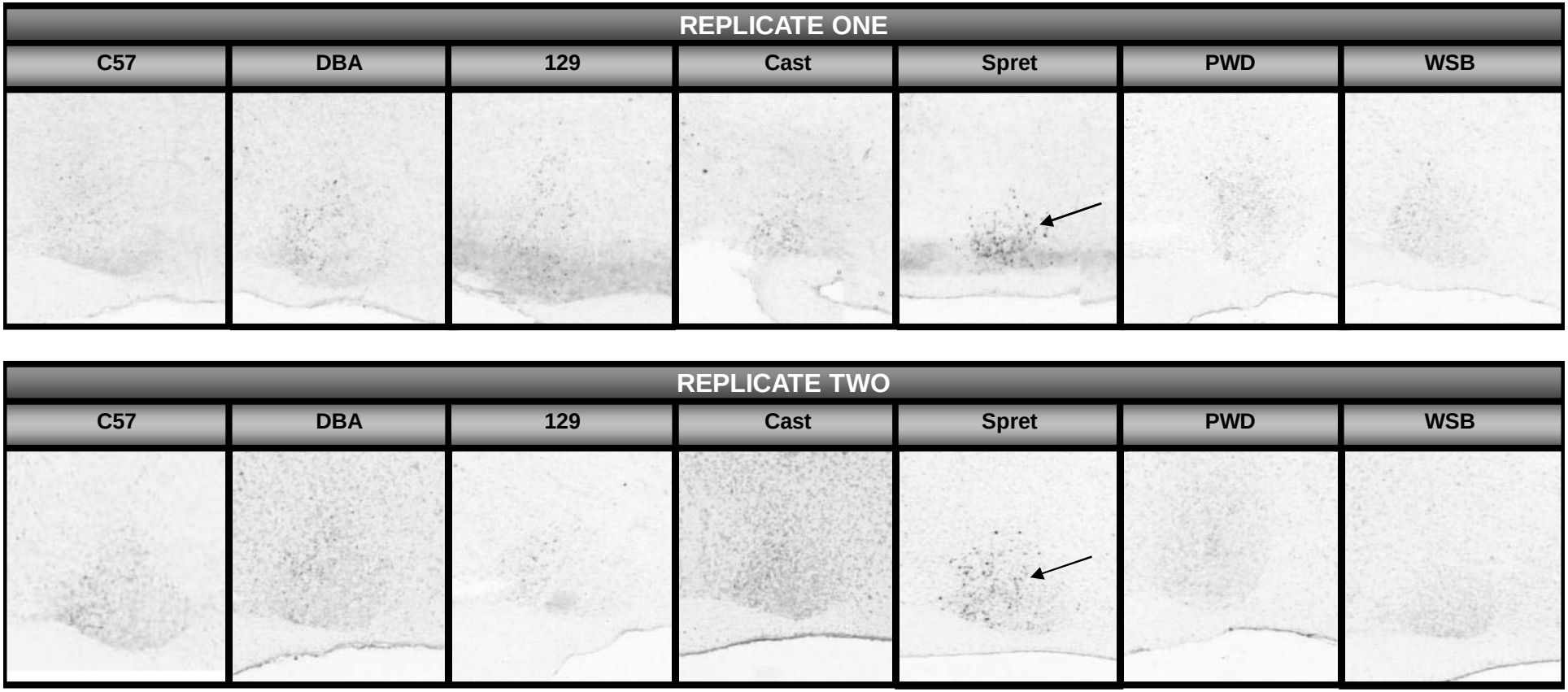
Esr2



RE: … < Spret, PWD

The Spret and PWD strains show greater density and intensity of estrogen receptor beta (Esr2) expression in the nucleus of reunions

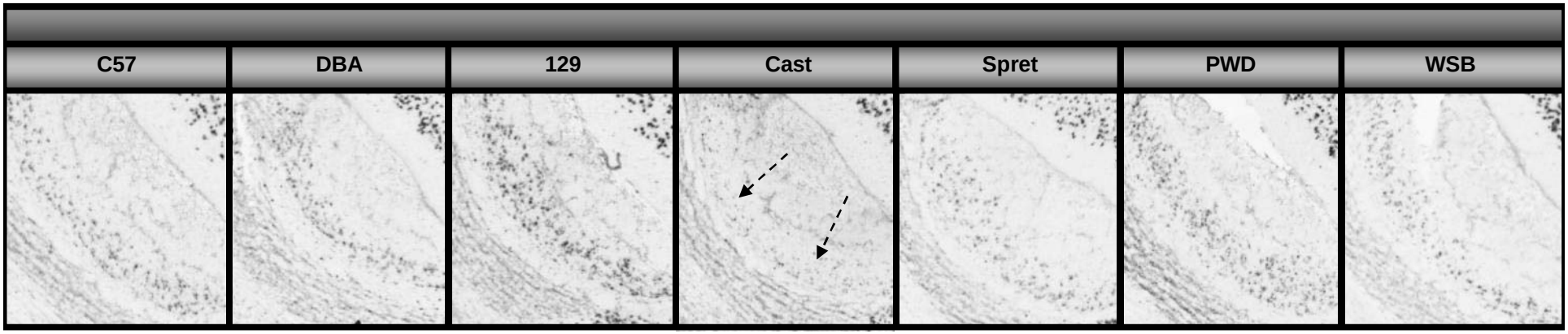
Esr2



SCH: … < Spret

The Spret strain shows greater density and intensity of estrogen receptor beta (Esr2) expression in the suprachiasmatic nucleus

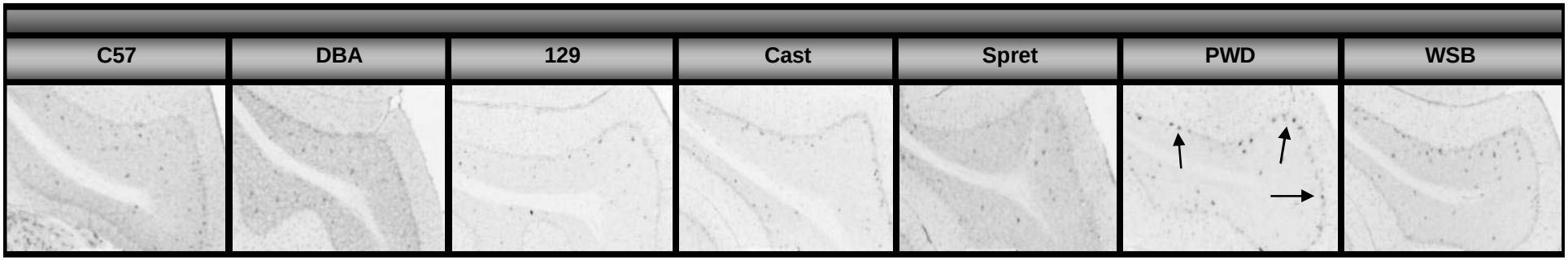
Faah



AOBmi: Cast < …

The Cast strain shows lower density and intensity of fatty acid amide hydrolase (Faah) expression in the accessory olfactory bulb, mitral layer

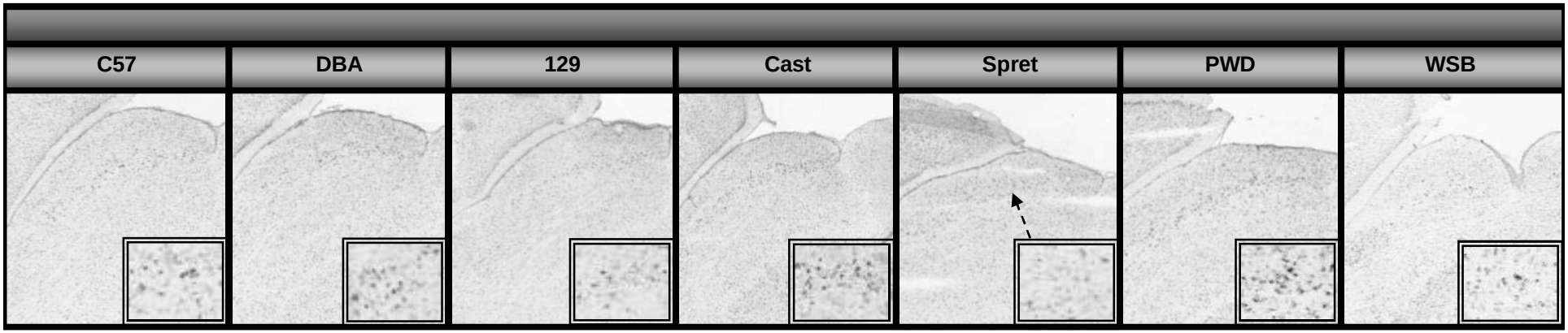
Gabra3



CBX(gr): … < PWD

The PWD strain shows greater density and intensity of gamma-aminobutryic acid receptor, subunit alpha 3 (Gabra3) expression in the superficial portion of the cerebellar cortex granule layer

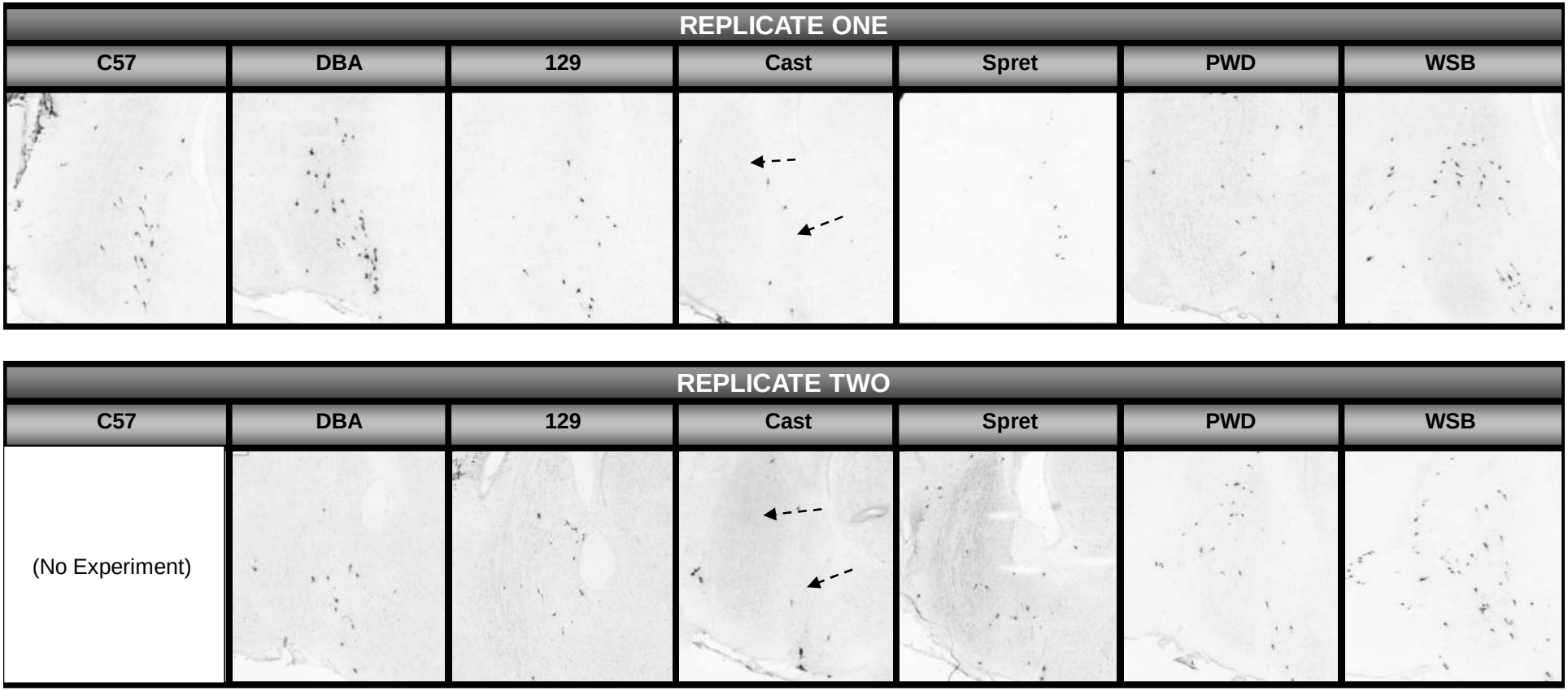
Gabrb1



SCs: Spret < …

The Spret strain shows lower density and intensity of gamma-aminobutyric acid receptor, subunit beta 1 (Gabrb1) in the superior colliculus, sensory related

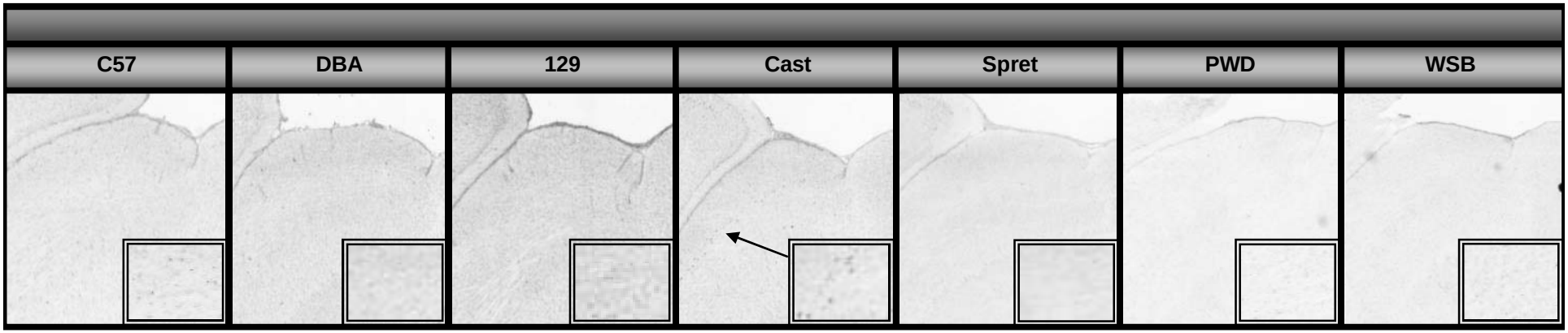
Gnrh1



MPO: Cast < …

The Cast strain shows lower density of gonadotropin releasing hormone 1 (Gnrh1) expression in the medial preoptic area

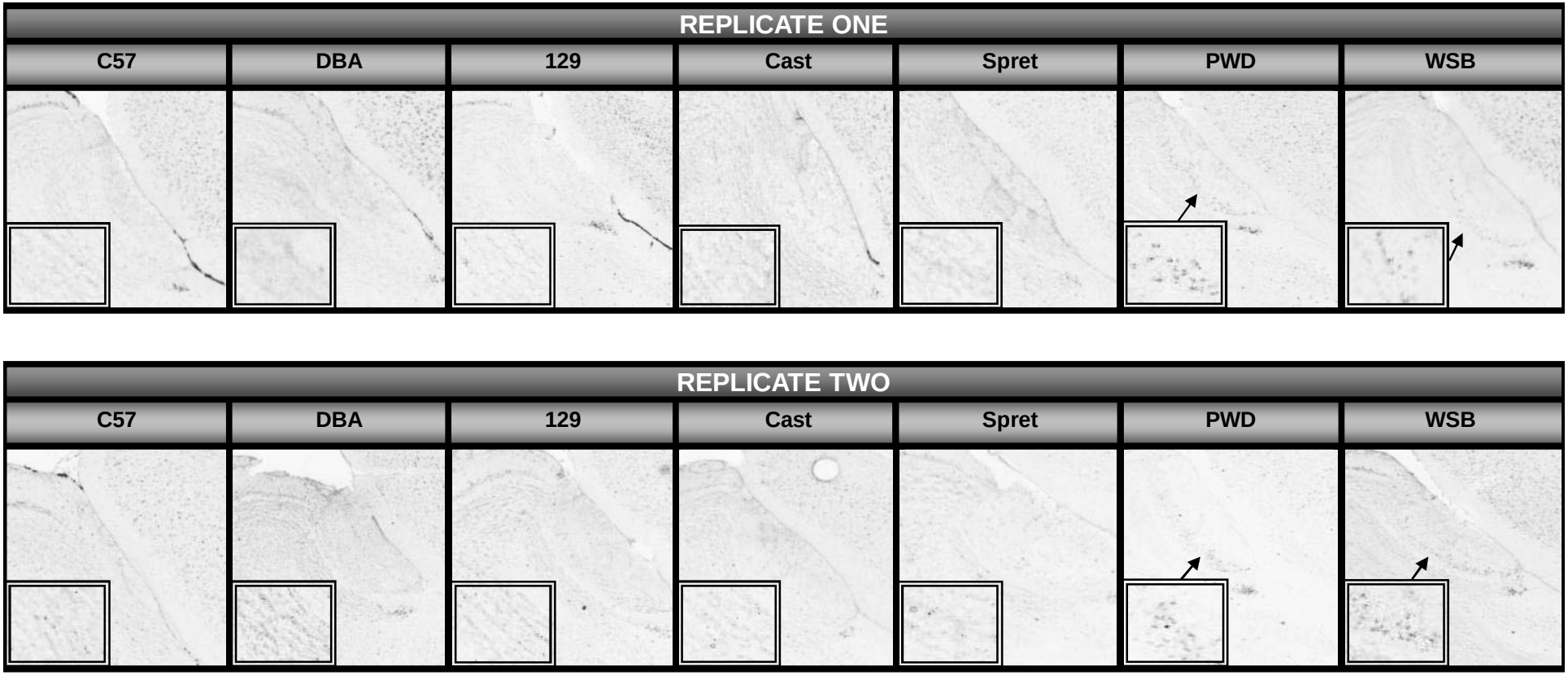
Hrh1



SCs: … < Cast

The Cast strain shows greater density and intensity of histamine receptor H 1 (Hrh1) expression in the superior colliculus, sensory related

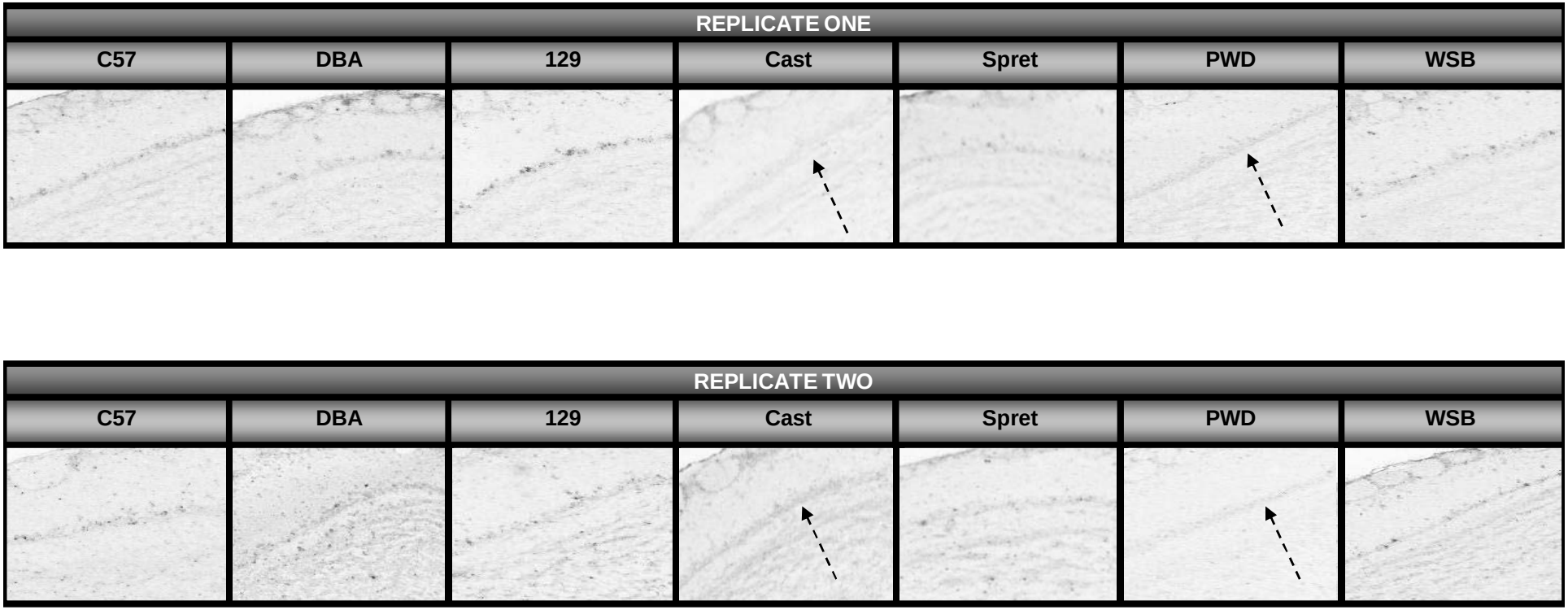
Htr1a



AOB: … < PWD, WSB

The PWD and WSB strains show greater density and intensity of 5-hydroxytryptamine receptor 1A (Htr1a) expression in the accessory olfactory bulb

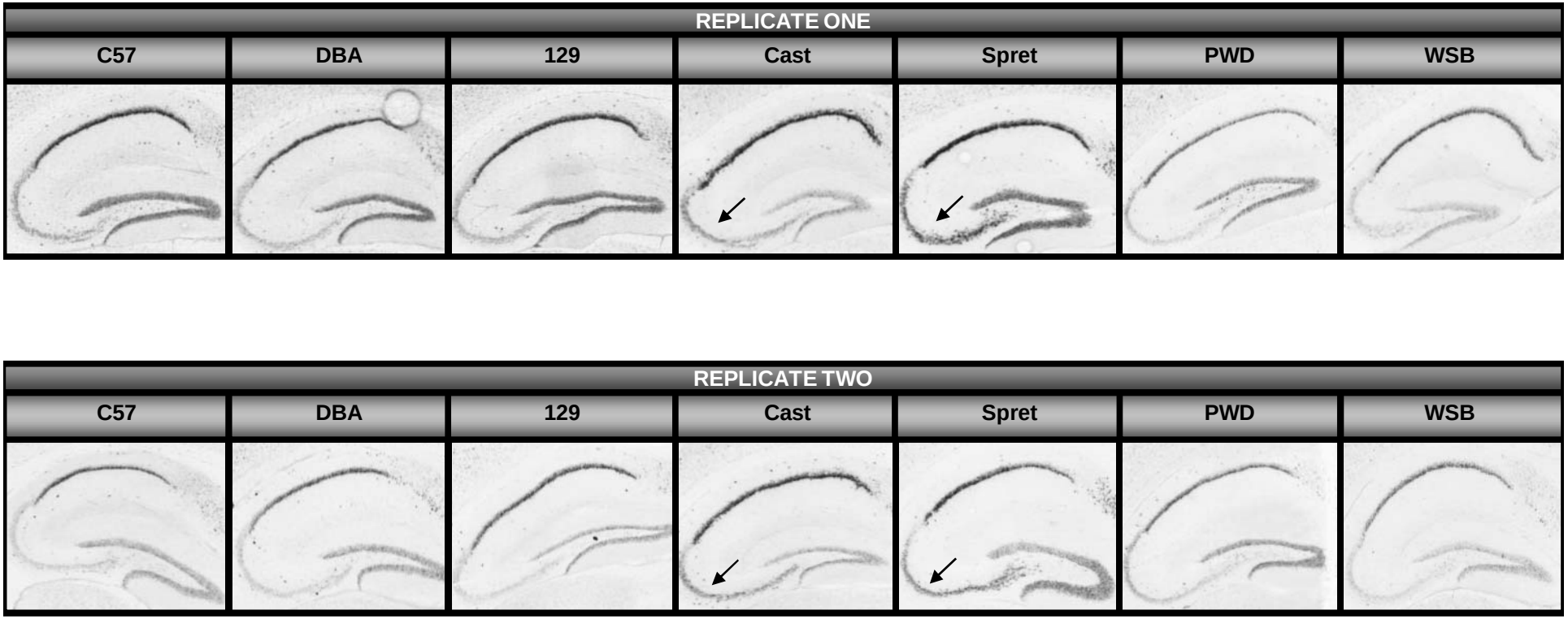
Htr1a



MOBmi: Cast, PWD < …

The Cast and PWD strains show lower density and intensity of 5-hydroxytryptamine receptor 1A (Htr1a) expression in the main olfactory bulb, mitral layer

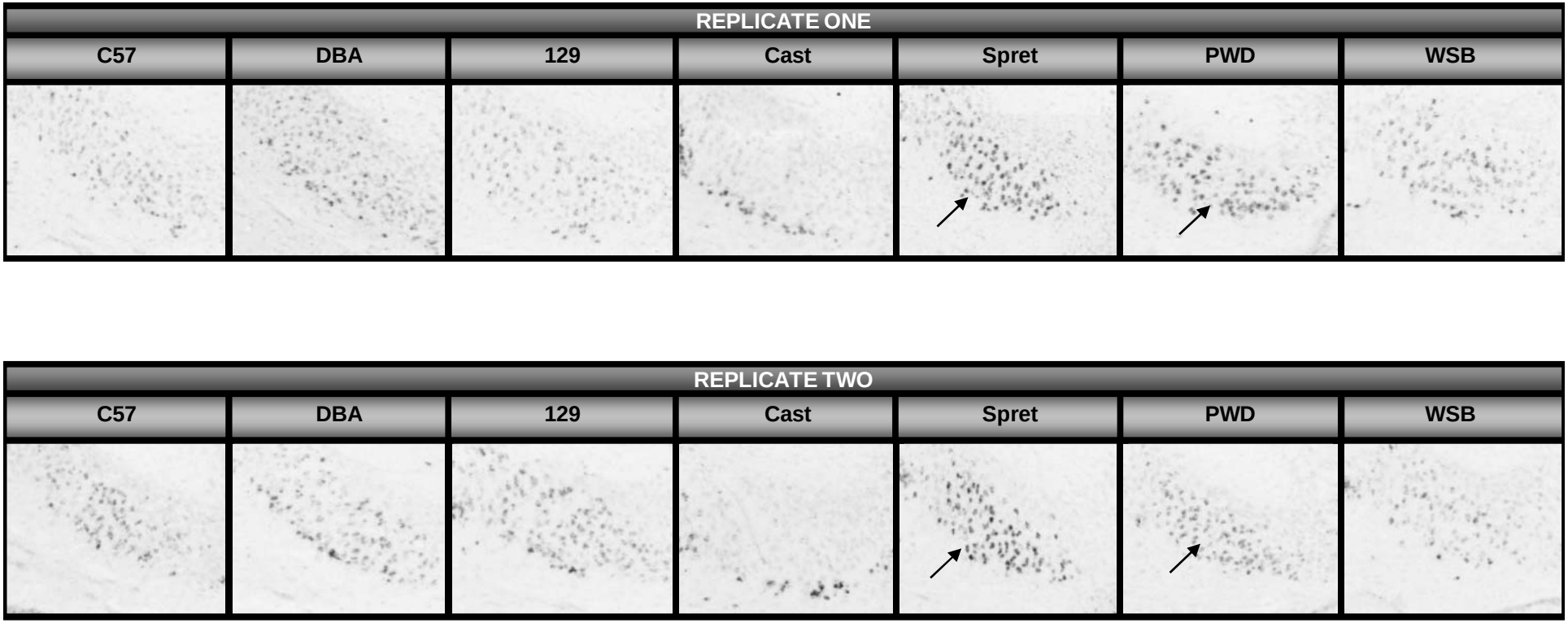
Htr1a



CA3sp: … < Spret, Cast

The Spret and Cast strains show greater density and intensity of 5-hydroxytryptamine receptor 1A (Htr1a) expression in the cornu ammonis field 3, pyramidal layer

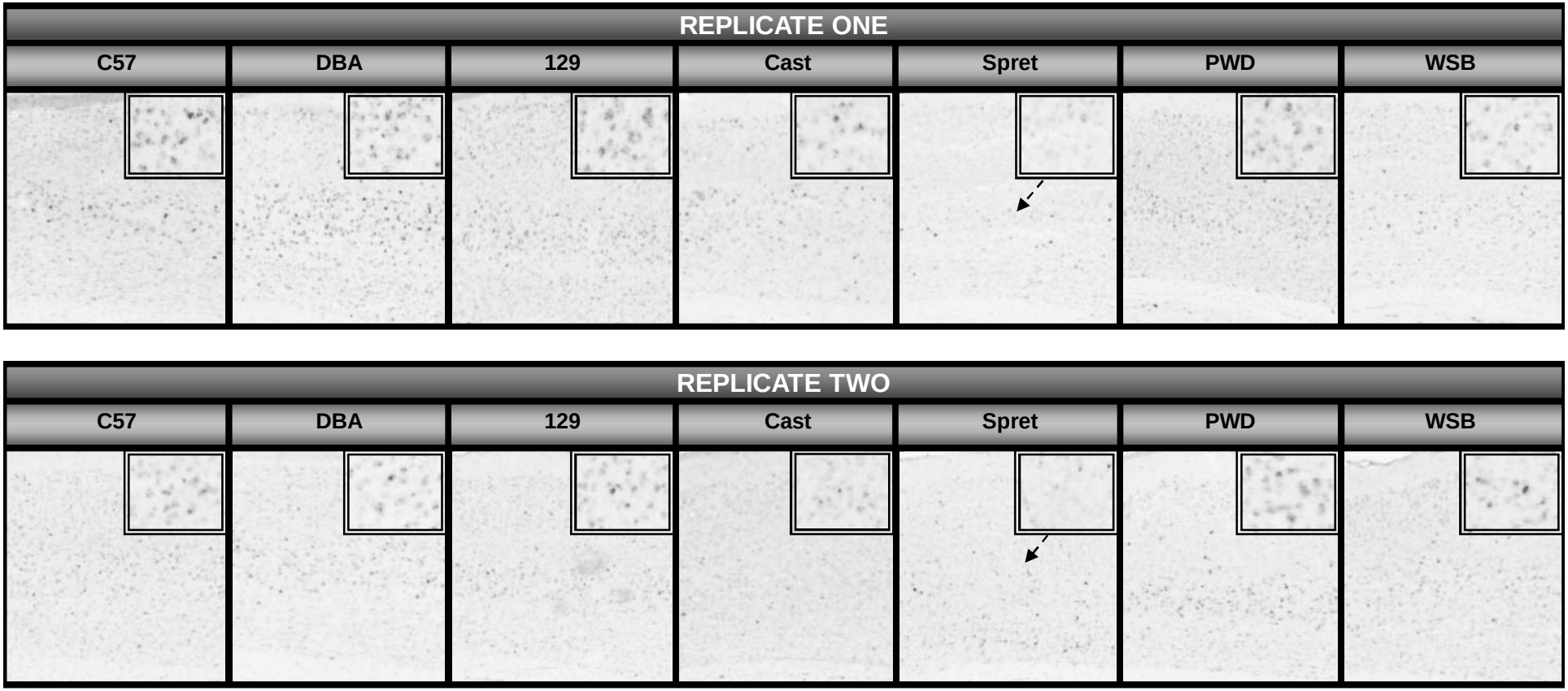
Htr1a



SUB: … < Spret, PWD

The Spret and PWD strains show greater density and intensity of 5-hydroxytryptamine receptor 1A (Htr1a) expression in the subiculum

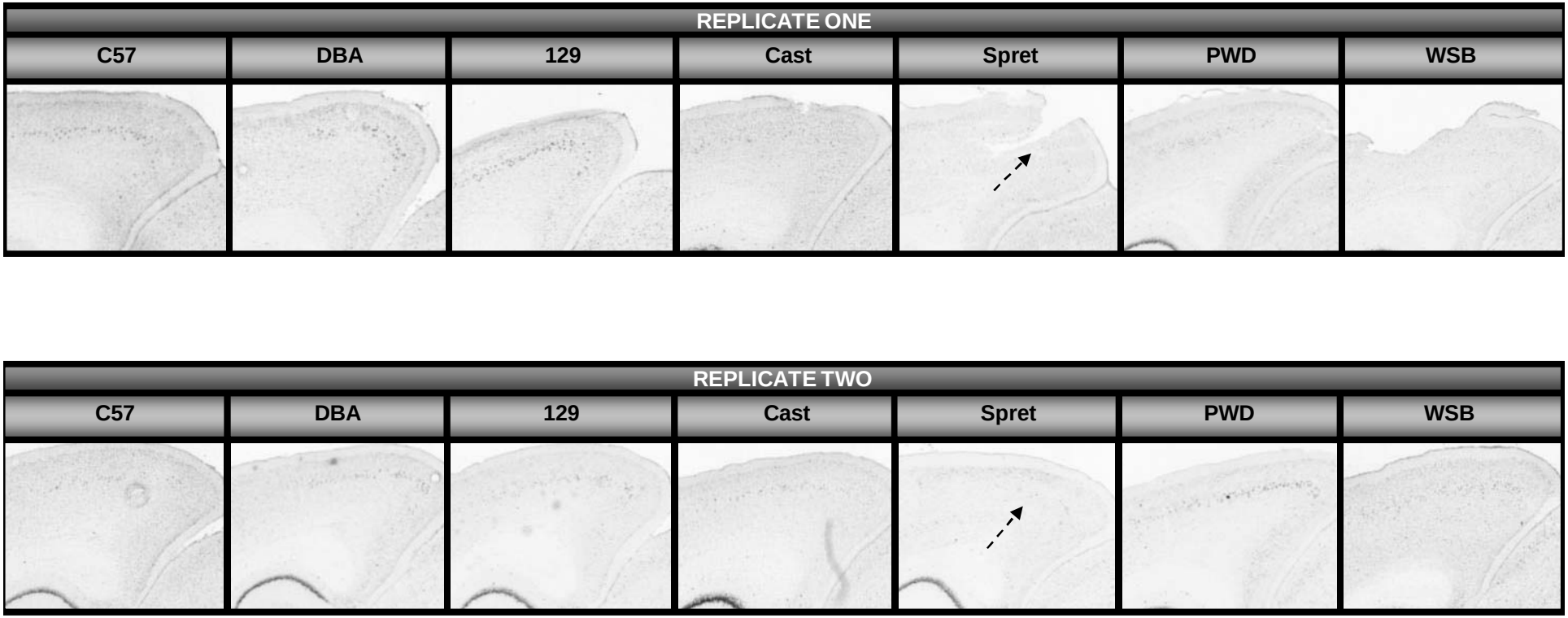
Htr1a



VIS(5): Spret < …

The Spret strain shows lower density of 5-hydroxytryptamine receptor 1A (Htr1a) expression in the underlying layer 5 cells (not large and scattered) of the visual cortex

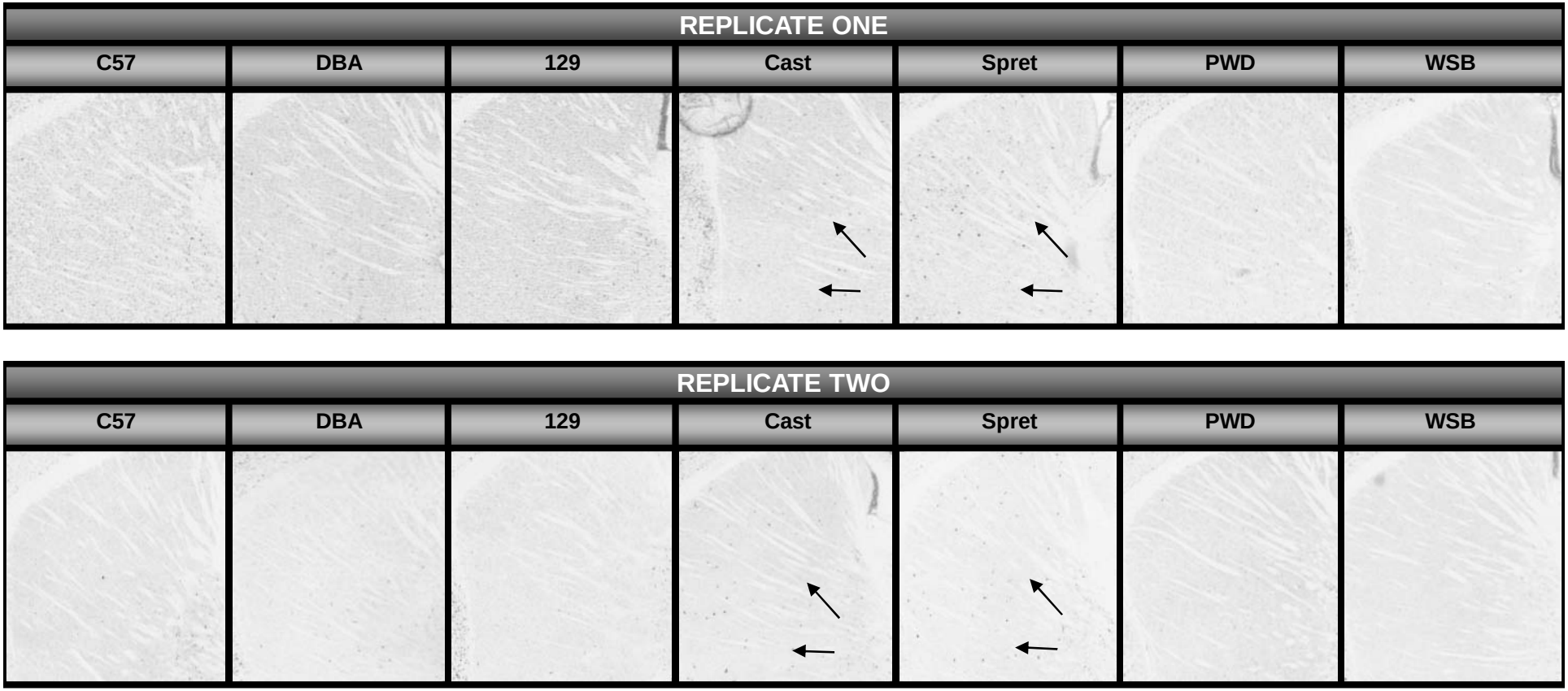
Htr1a



RSPd(5): Spret < …

The Spret strain shows lower density and intensity of 5-hydroxytryptamine receptor 1A expression (Htr1a) in layer 5 of the retrosplenial area, dorsal part

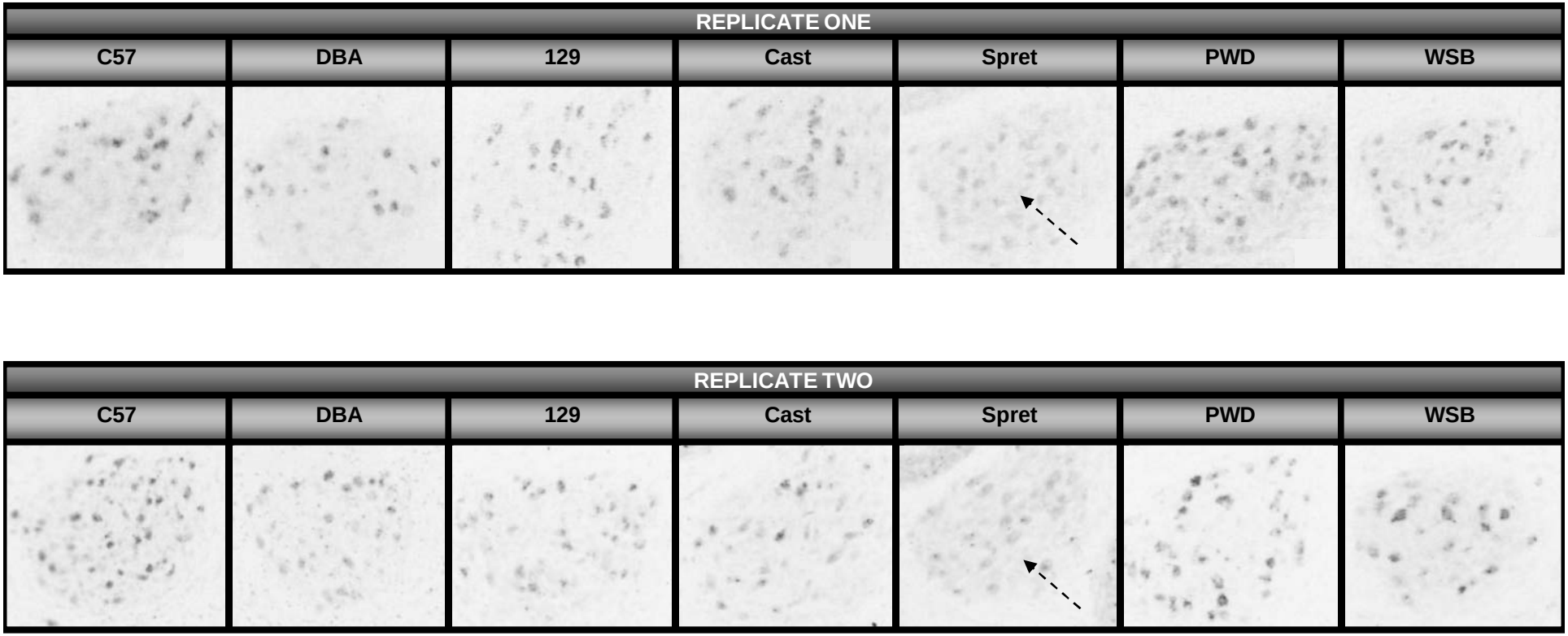
Htr1a



CP: … < Cast, Spret

The Spret and Cast strains show greater density and intensity of 5-hydroxytryptamine receptor 1A (Htr1a) expression in the caudate putamen

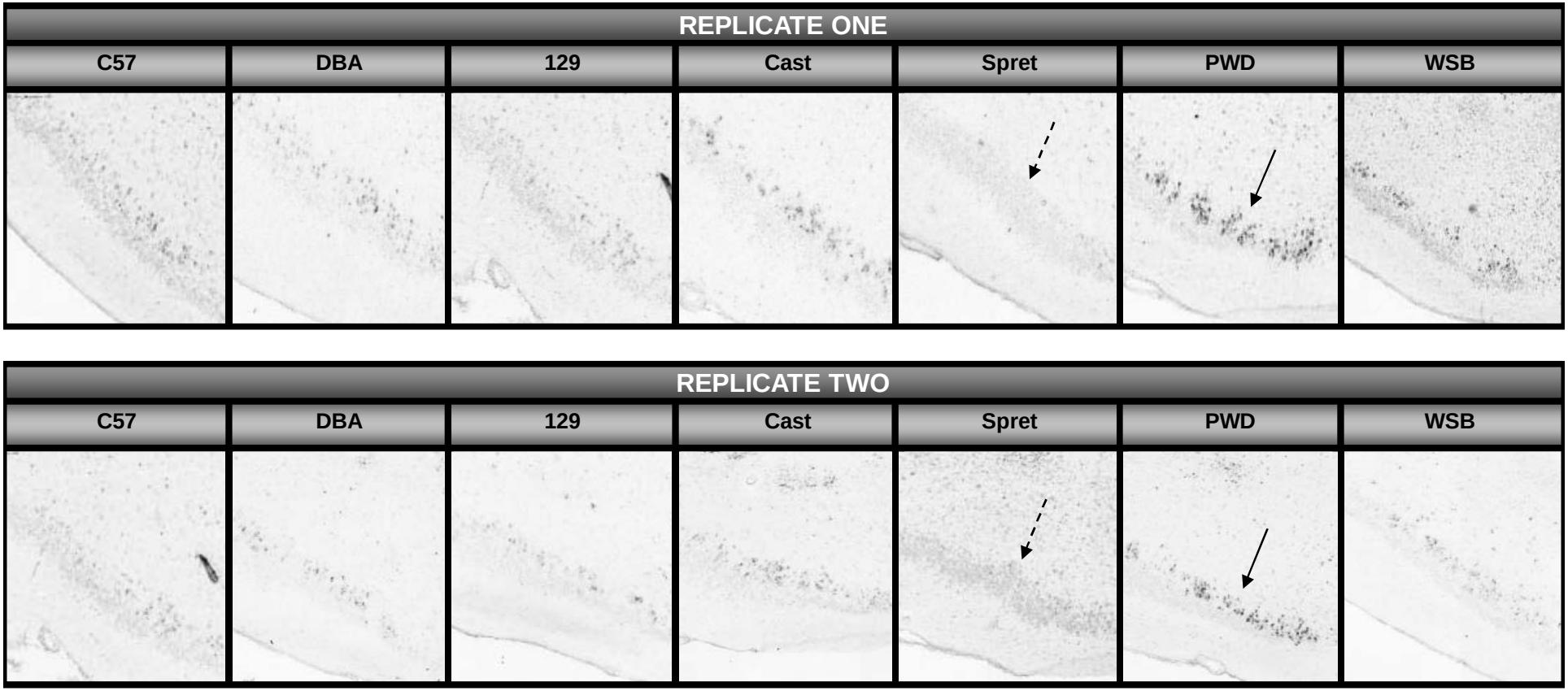
Htr1a



FN: Spret < …

The Spret strain shows lower density and intensity of 5-hydroxytryptamine (serotonin) receptor 1A (Htr1a) expression in the fastigial nucleus

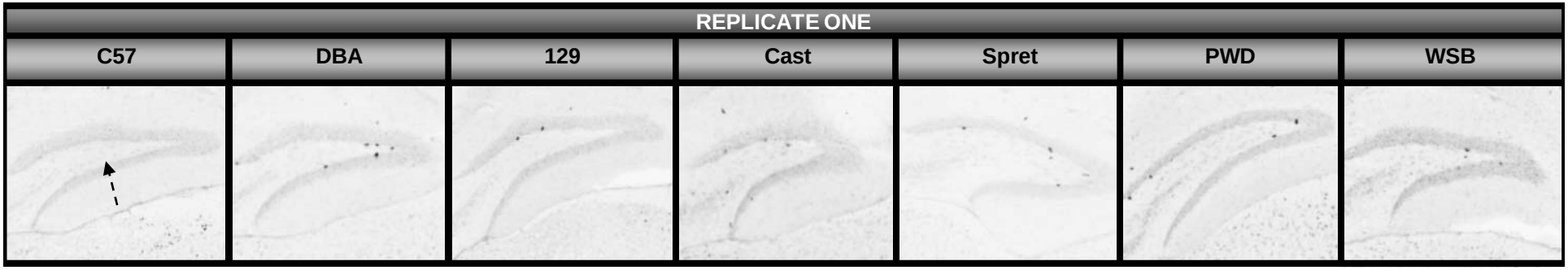
Htr1b

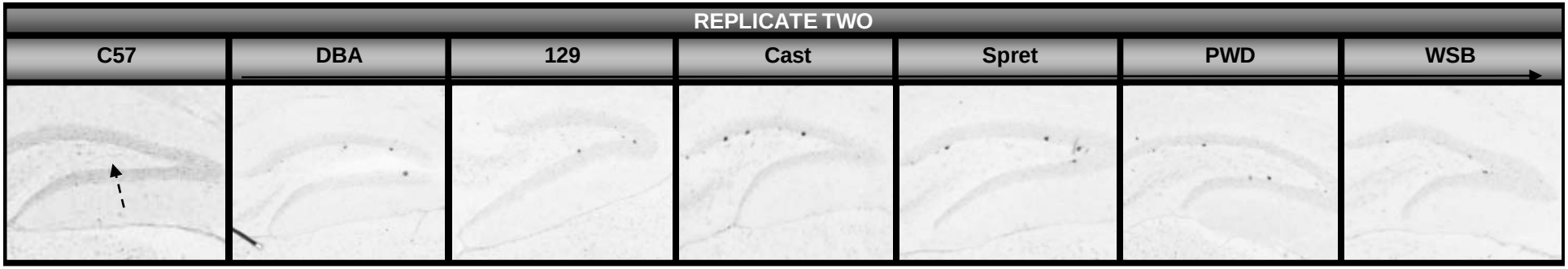


PIR(2): Spret < … < PWD

The Spret strain shows lower density of 5-hydroxytryptamine receptor 1B (Htr1b) expression in the piriform area, pyramidal layer; the PWD strain shows greater

Htr1b

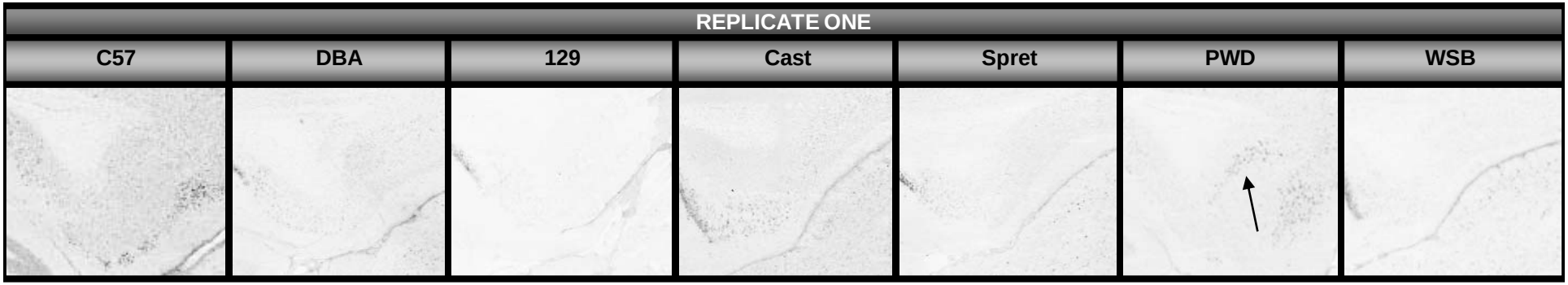


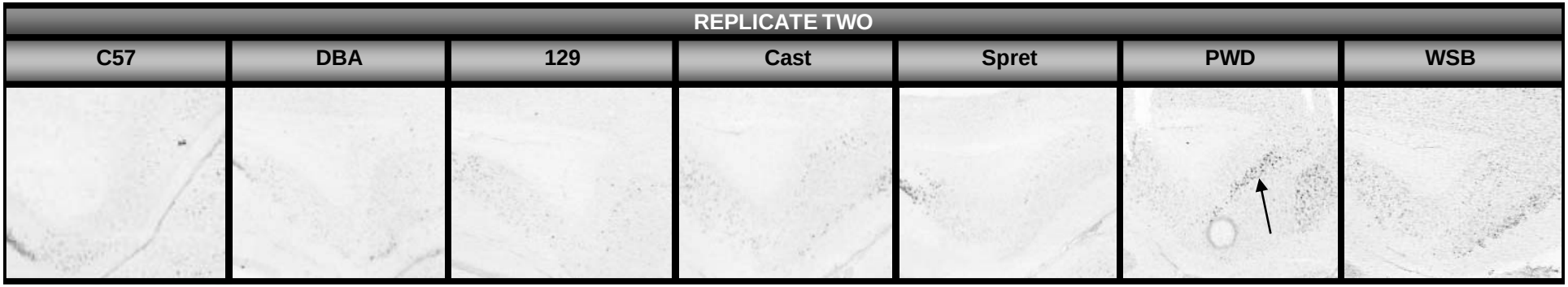


DG(po): C57 < …

The C57 strain shows lower density of 5-hydroxytryptamine receptor 1B (Htr1b) expression in the dentate gyrus, polymorph layer

Htr1b

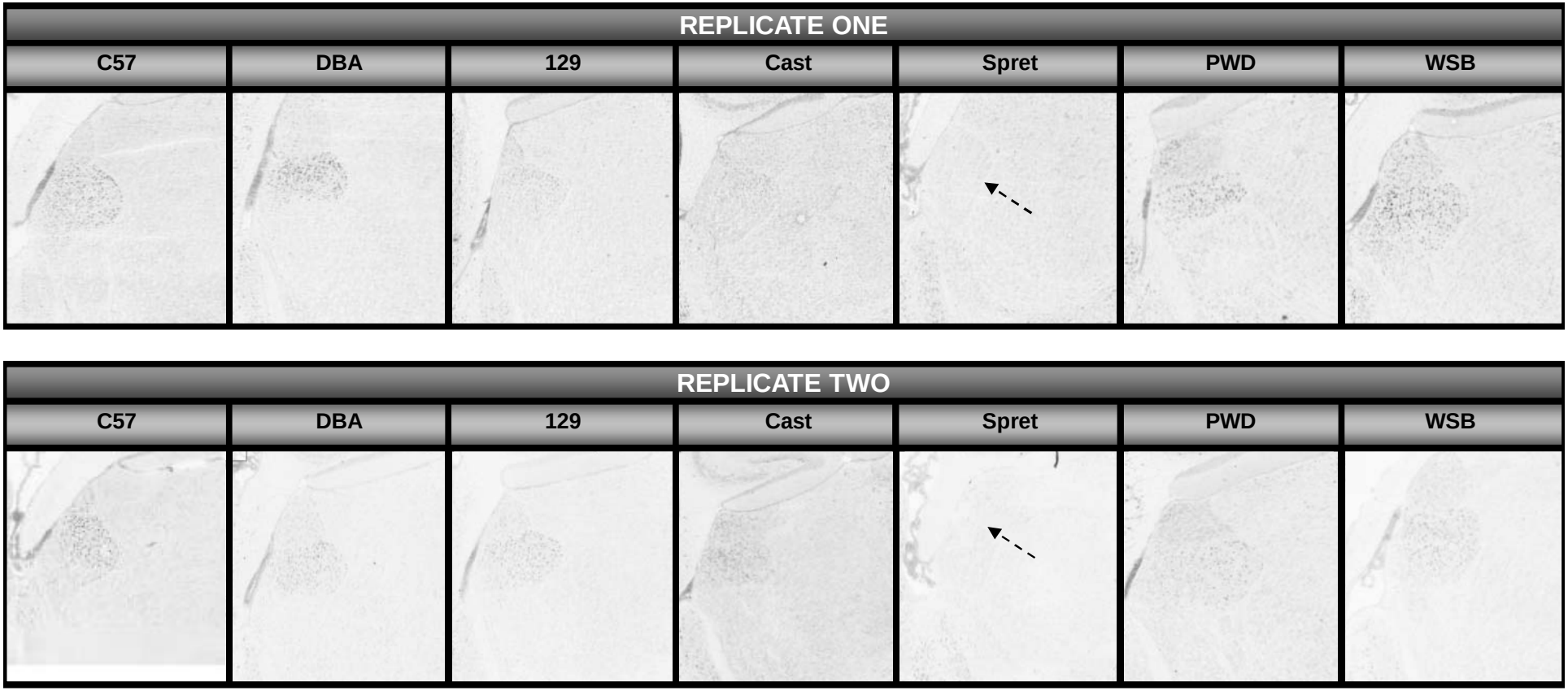




POST: … < PWD

The PWD strain shows greater density and intensity of 5-hydroxytryptamine receptor 1B (Htr1b) expression in the postsubiculum

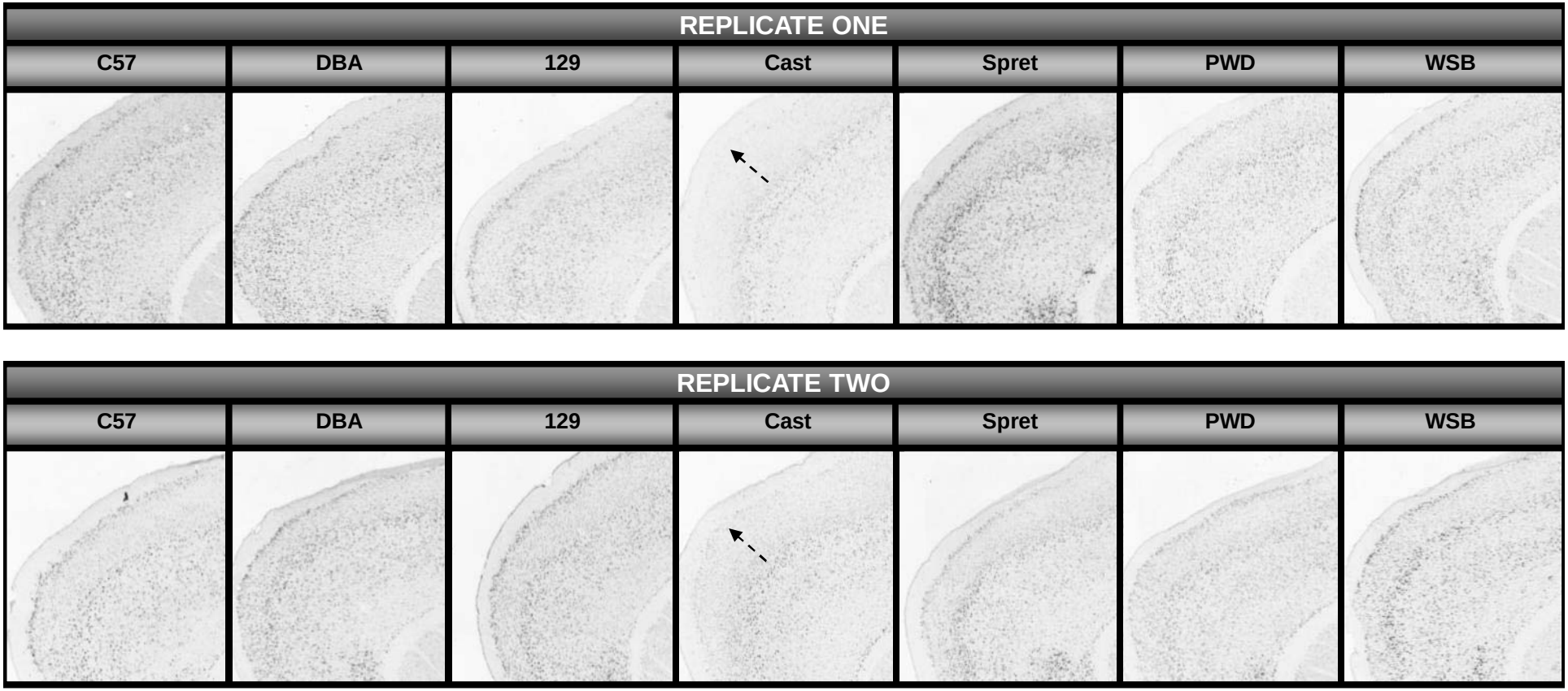
Htr1b



AV: Spret < …

The Spret strain shows lower density and intensity of 5-hydroxytryptamine receptor 1B (Htr1b) expression in the anteroventral nucleus of thalamus

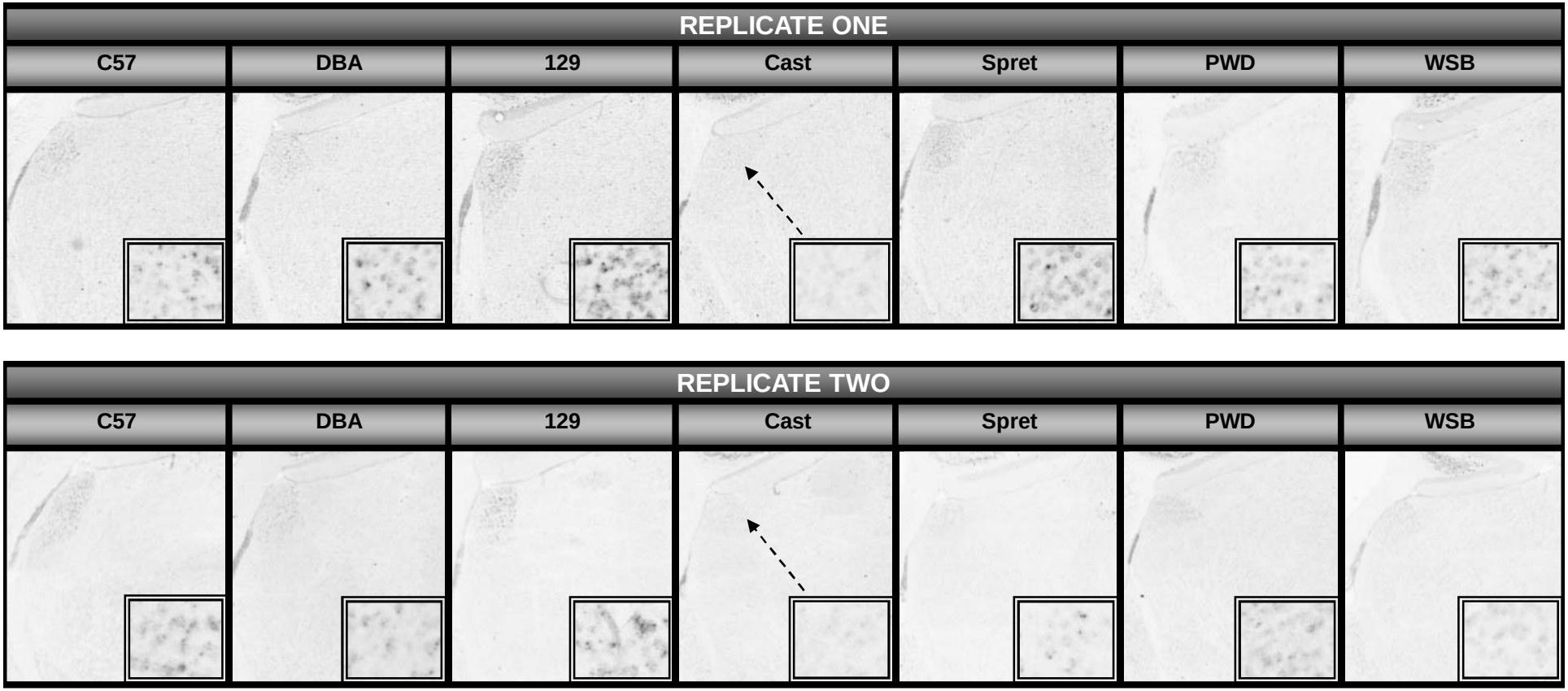
Htr2a



MO(2/3): Cast < …

The Cast strain shows lower density and intensity of 5-hydroxytryptamine receptor 2A (Htr2a) expression in the superficial portion of layer 2/3 of the motor cortex

Htr2a



AD: Cast < …

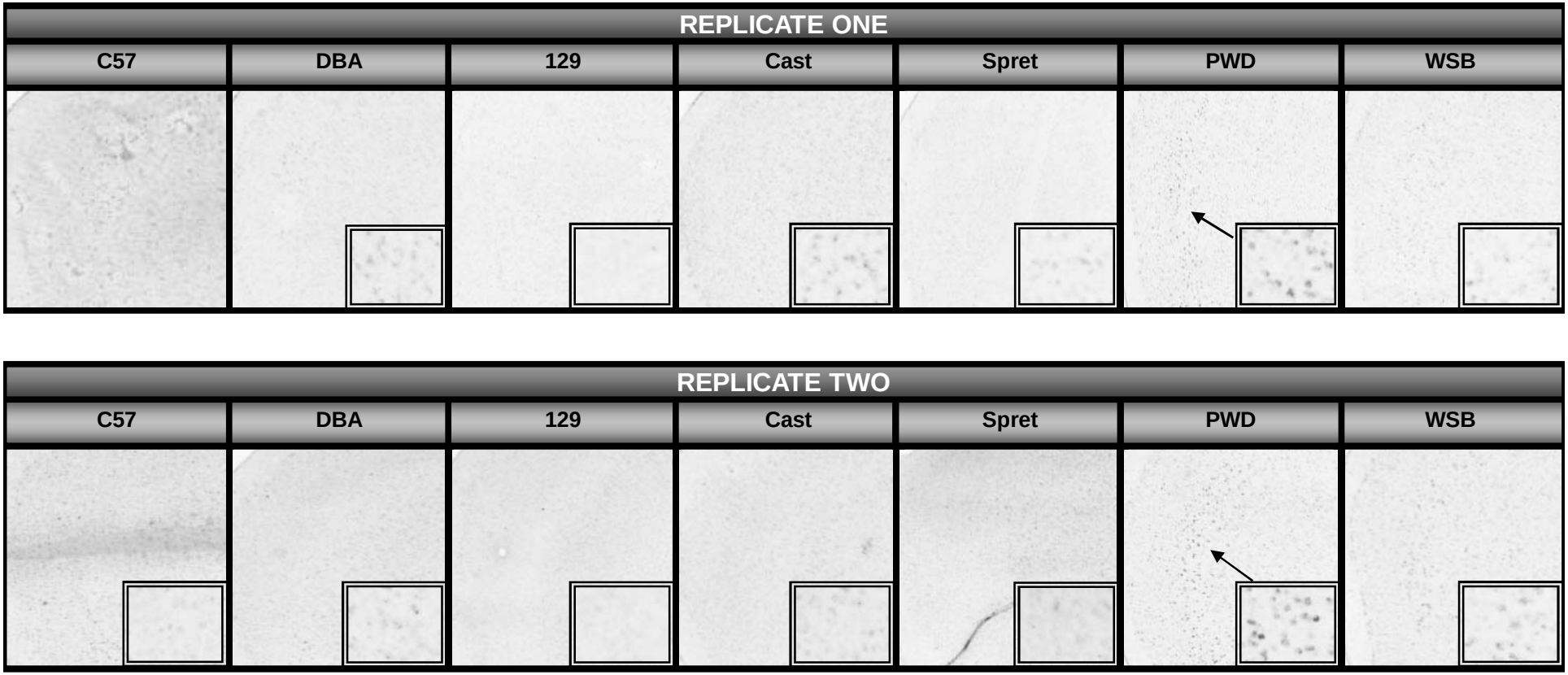
The Cast strain shows lower density and intensity of 5-hydroxytryptamine receptor 2A (Htr2a) expression in the anterodorsal nucleus of thalamus

Maob

MOBmi: … < PWD

The PWD strain shows greater density and intensity of monamine oxidase B (Maob) expression in the main olfactory bulb, mitral layer

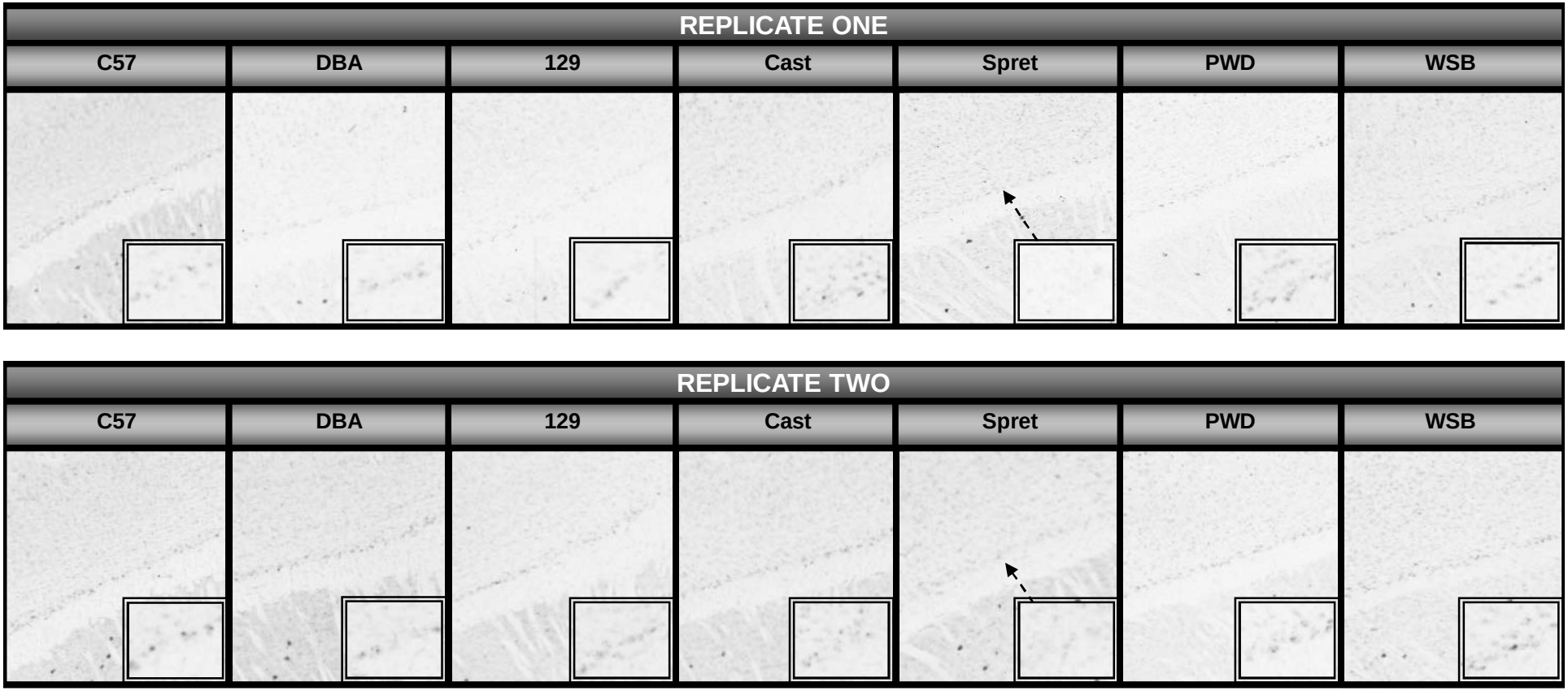
Maob



MO(2/3): … < PWD

The PWD strain shows greater density and intensity of monamine oxidase B (Maob) expression in the deep portion of layer 2/3 of anterior, ventral motor cortex

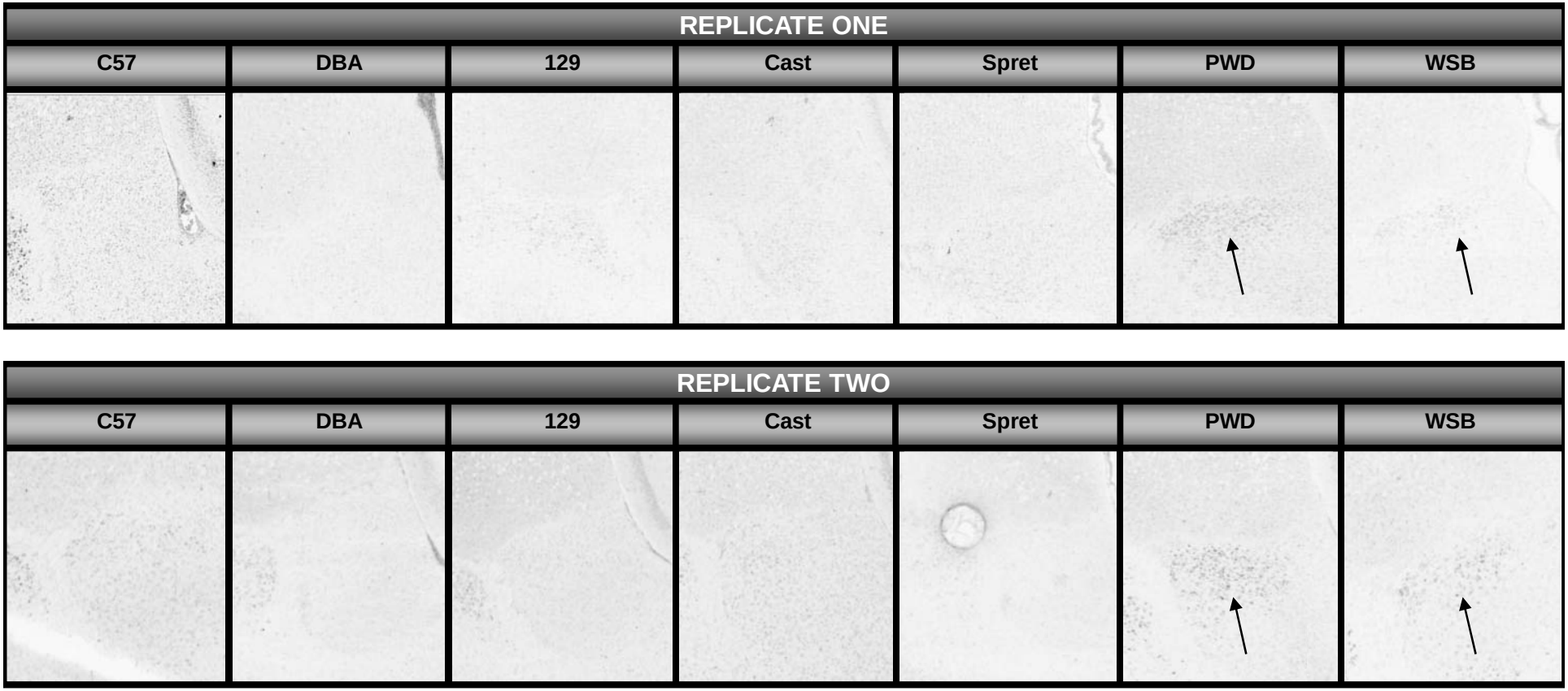
Maob



CTX(6b): Spret < …

The Spret strain shows lower density and intensity of monamine oxidase B (Maob) expression in the cortical subplate, layer 6b

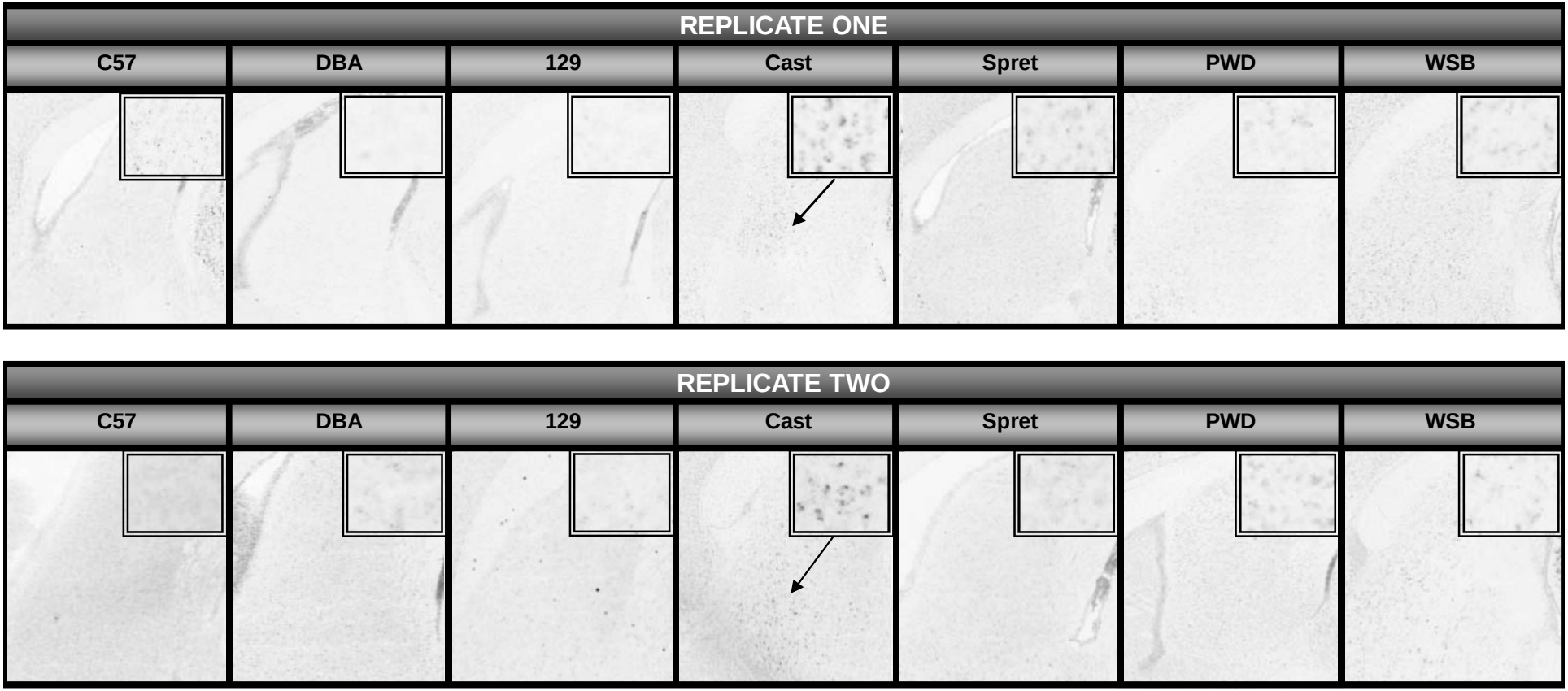
Maob



LA: … < PWD, WSB

The PWD and WSB strains show greater density and intensity of monamine oxidase B (Maob) expression in the lateral amygdalar nucleus

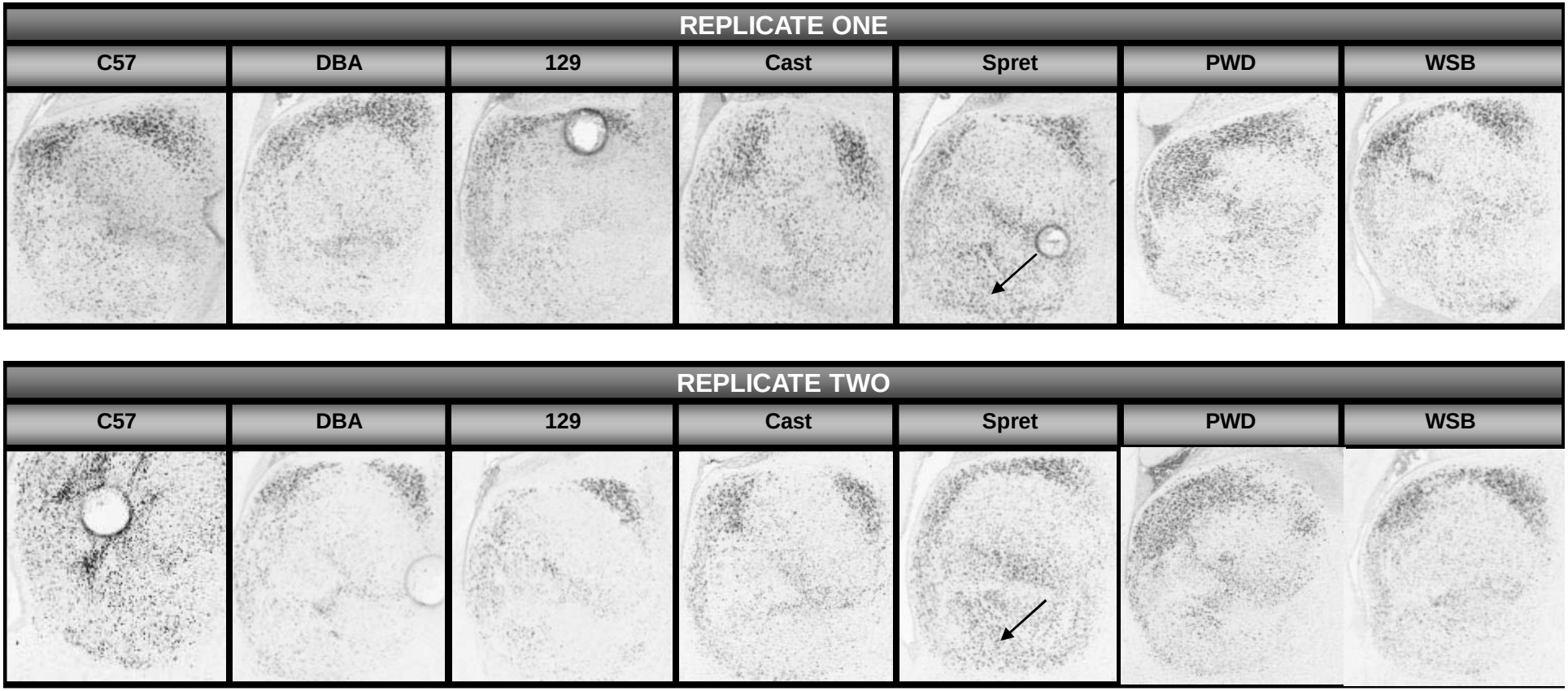
Maob



LSr: … < Cast

The Cast strain shows greater density and intensity of monamine oxidase B (Maob) expression in the lateral septal nucleus, rostral part

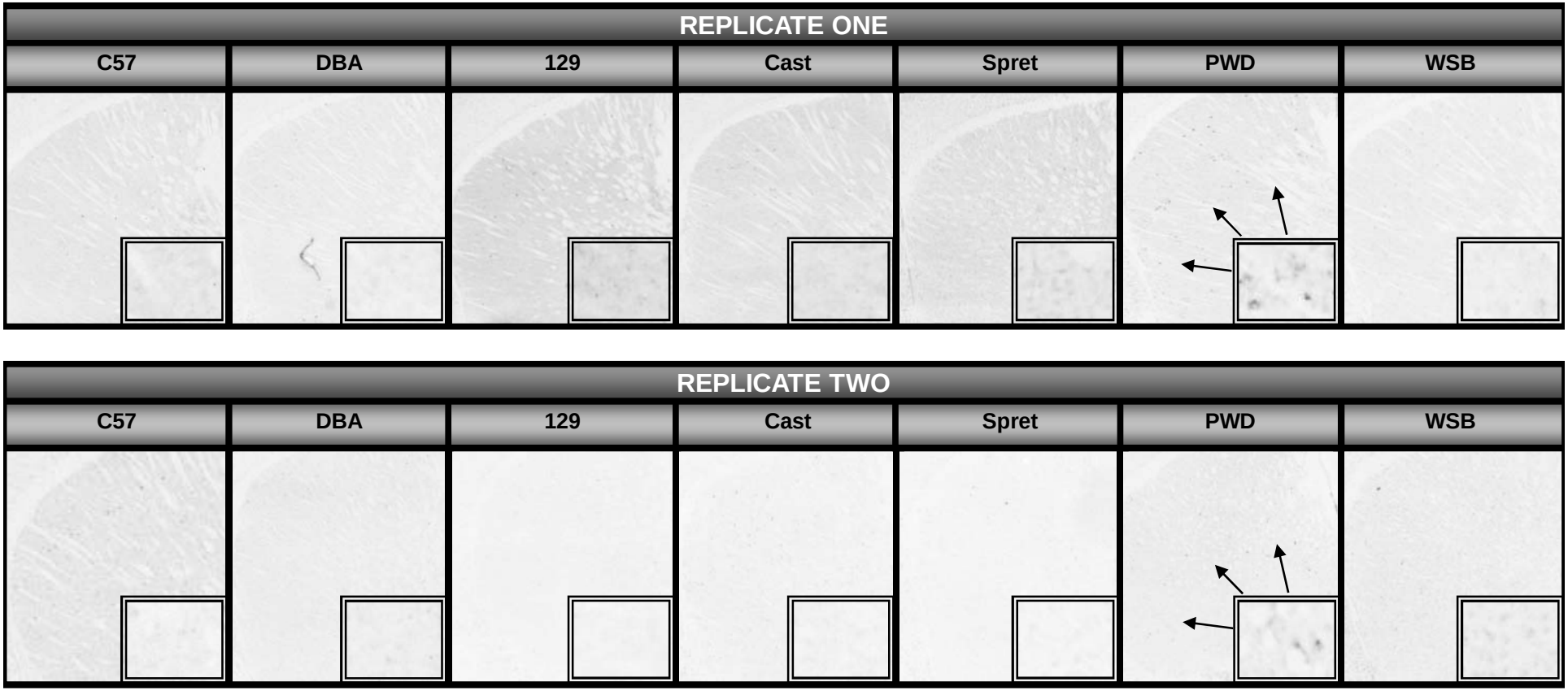
Maob



RE: … < Spret

The Spret strain shows greater density and intensity of monamine oxidase B (Maob) expression in the thalamic nucleus of reunions

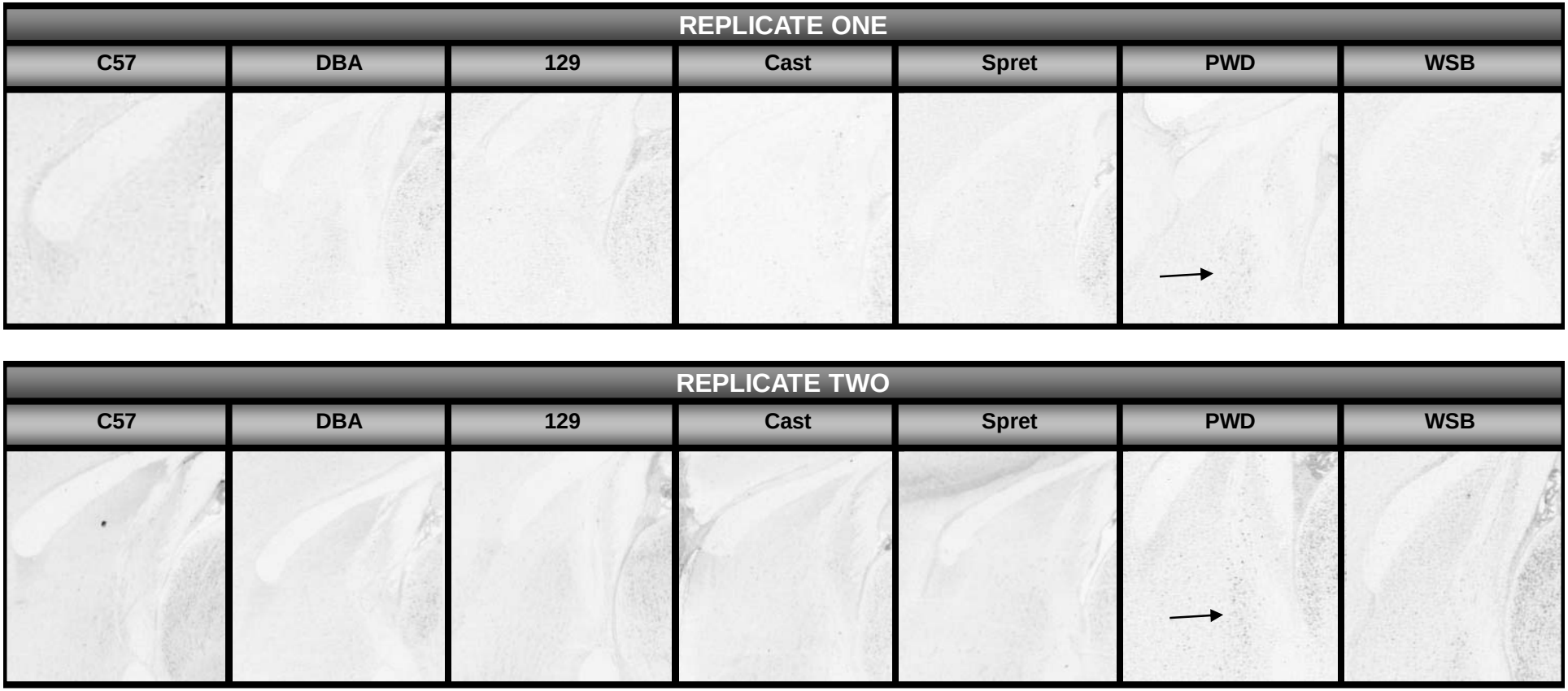
Oprm1



CP: … < PWD

The PWD strain shows greater density and intensity of opioid receptor, mu 1 (Oprm1) expression in the caudate putamen

Oprm1

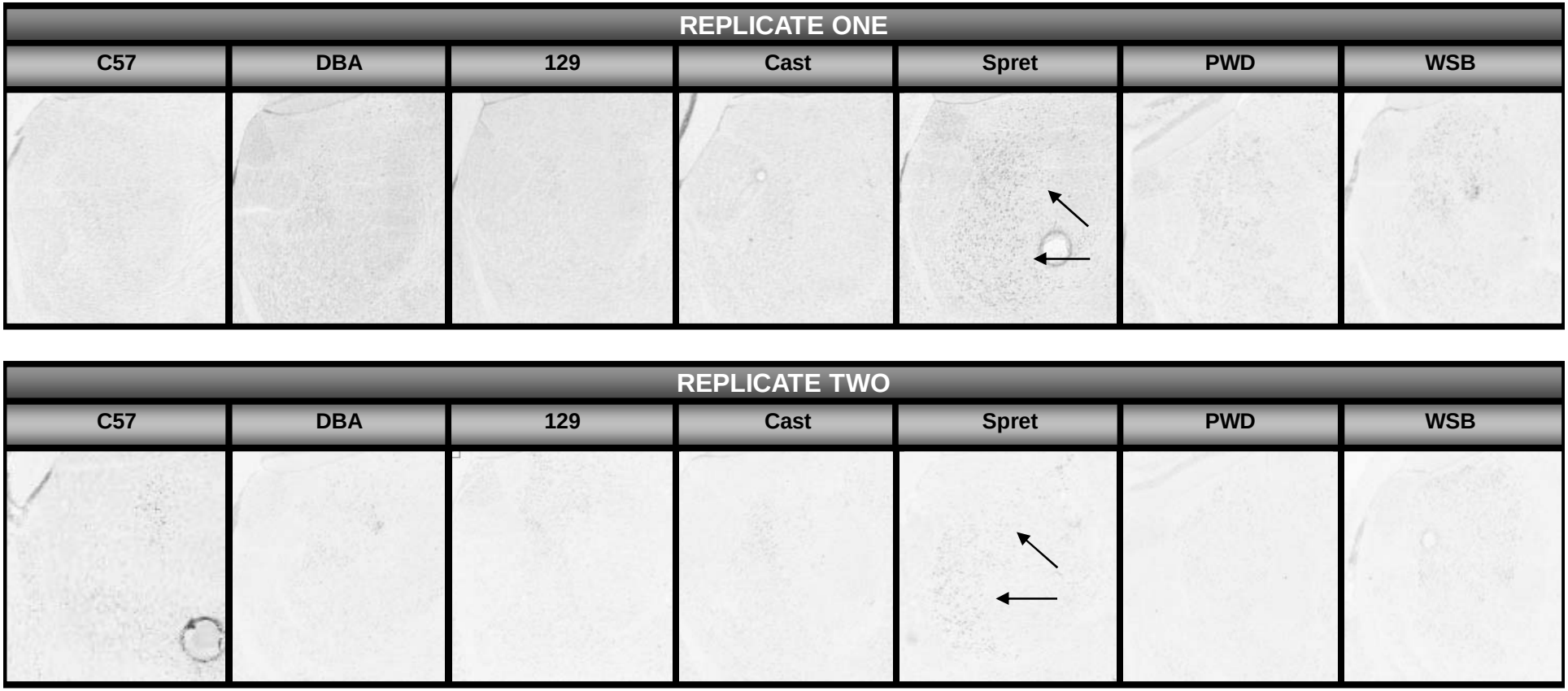


MS: … < PWD

The PWD strain shows greater density and intensity of opioid receptor, mu 1 (Oprm1) expression in the medial septal nucleus

62a,b

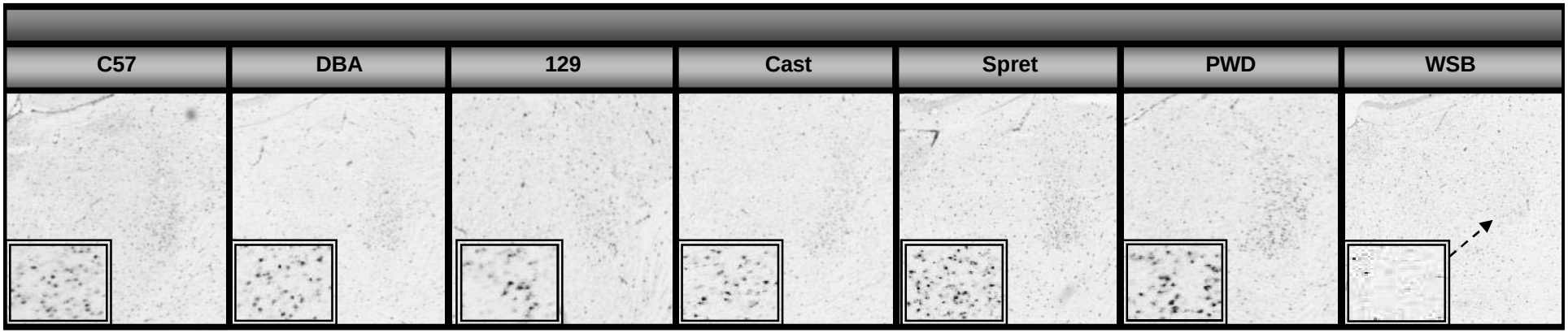
Oprm1



VAL, VPL: … < Spret

The Spret strain shows greater density and intensity of opioid receptor, mu 1 (Oprm1) expression in the ventral anterolateral complex and ventral posterolateral nuclei of the thalamus

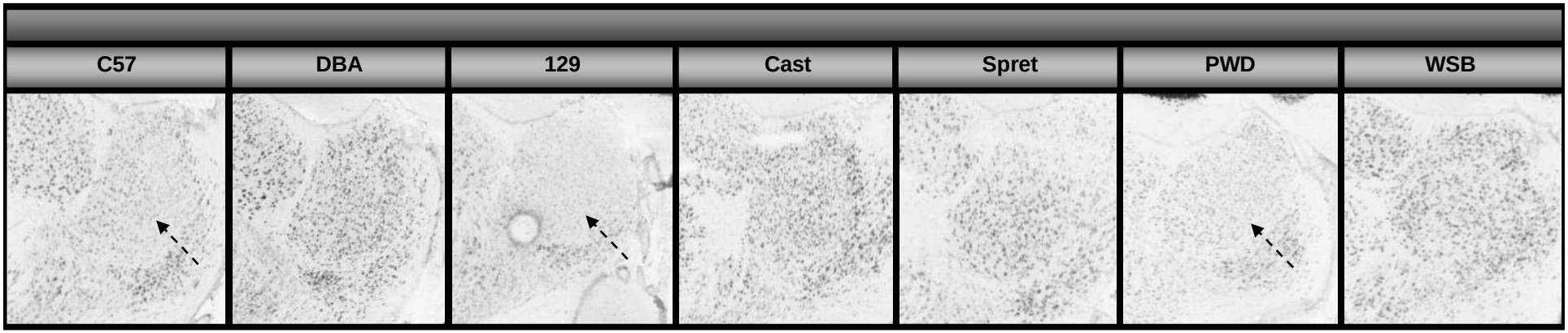
Pdgfrb



PF: WSB < …

The WSB strain shows lower density and intensity of platelet derived growth factor receptor, beta polypeptide (Pdgfrb) in the parafascicular nucleus

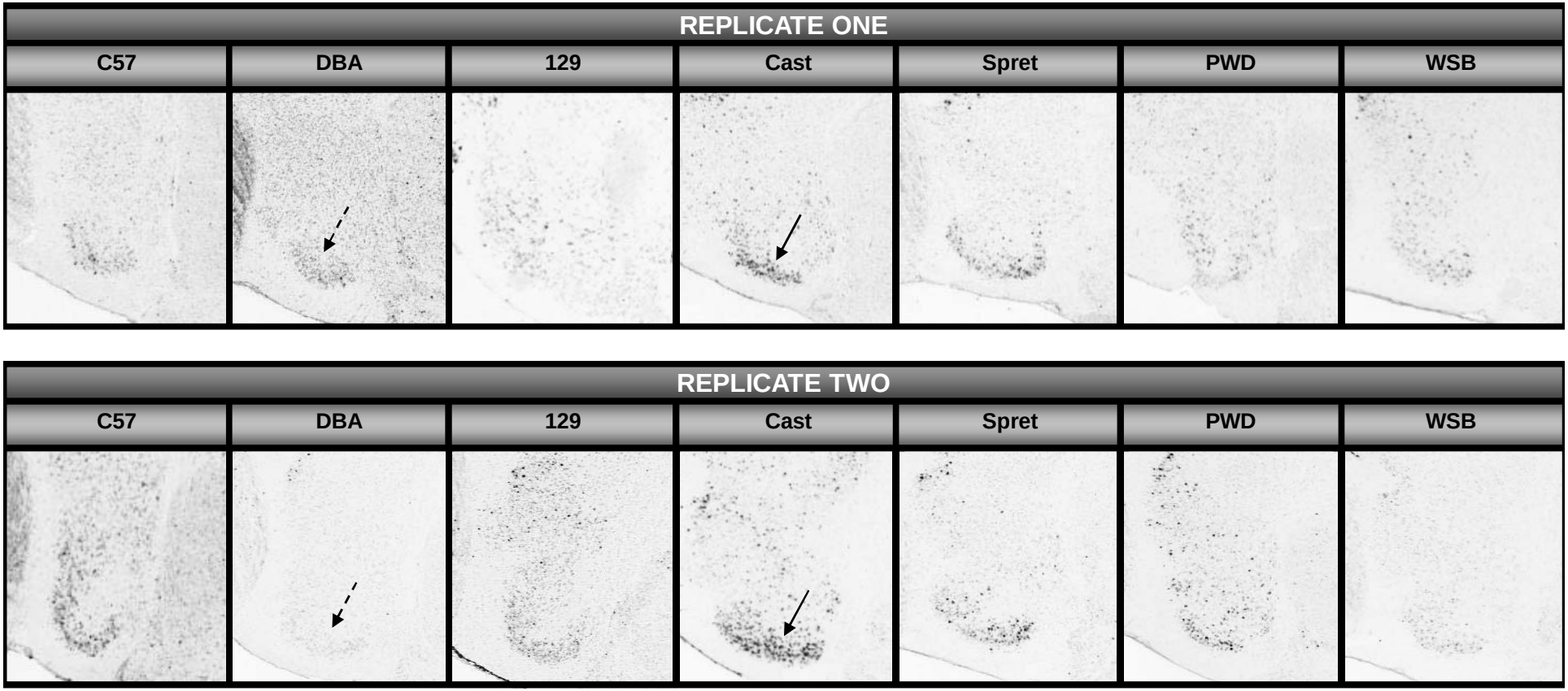
Ppp3ca



MG: C57, 129, PWD < …

The C57, 129 and PWD strains show lower density and intensity of protein phosphatase 3, catalytic subunit, alpha isoform (Ppp3ca) in the medial geniculate complex

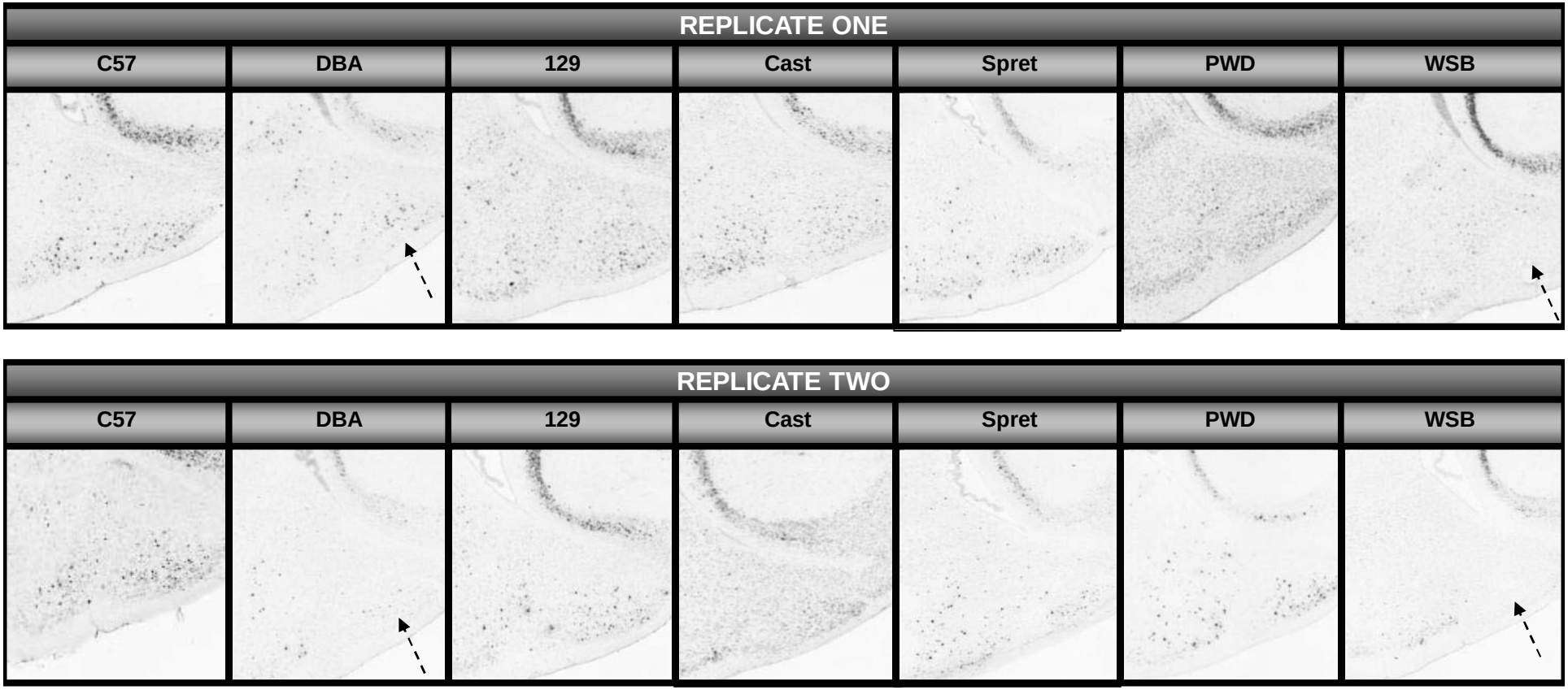
Ptgs2



TTv: DBA < … < Cast

The DBA strain shows lower density and intensity of prostaglandin-endoperoxide synthase 2 (Ptgs2) expression in the taenia tecta, ventral part; the Cast strain shows greater

Ptgs2

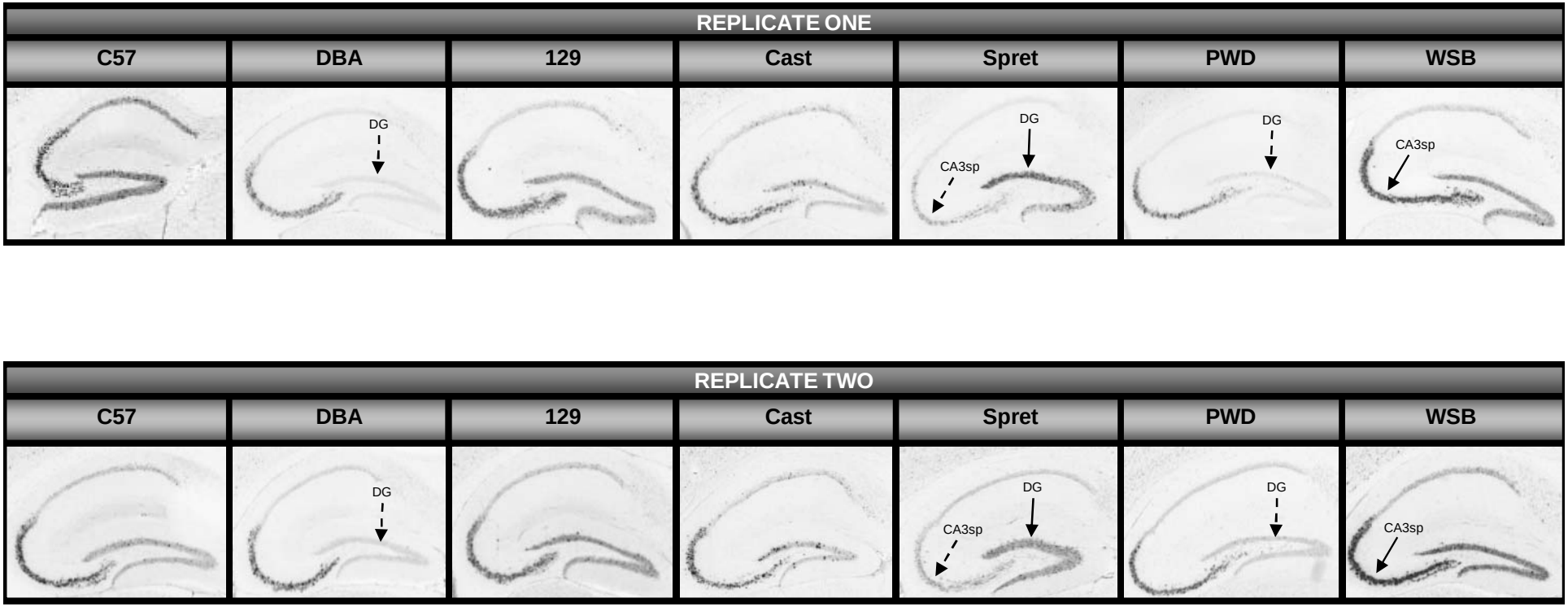


COA: DBA, WSB < …

The DBA and WSB strains show lower density of prostaglandin-endoperoxide synthase 2 (Ptgs2) expression in the cortical amygdalar area

67a,b

Ptgs2

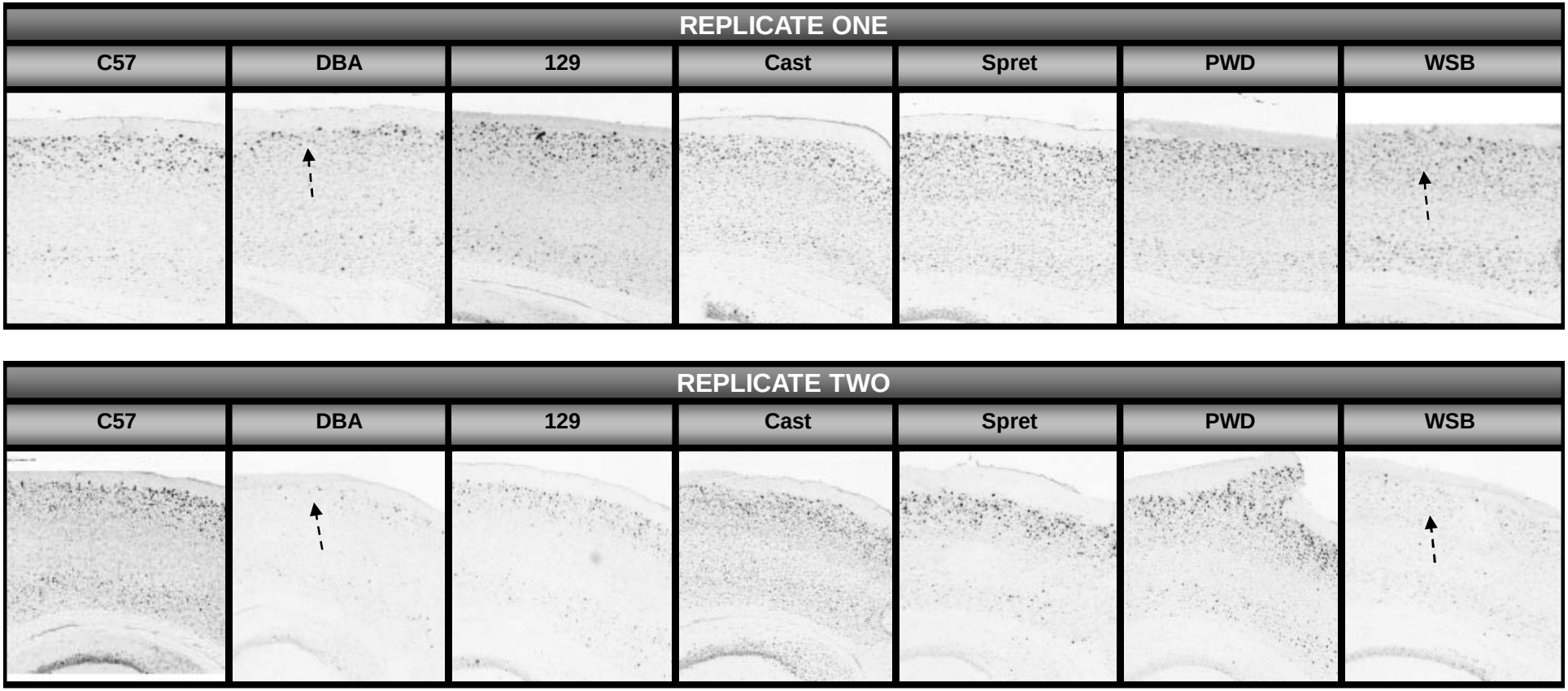


CA3sp: Spret < … < WSB

DG: DBA, PWD < … < Spret

The Spret strain shows lower density and intensity of prostaglandin-endoperoxide synthase 2 (Ptgs2) expression in the cornu ammonis field 3, pyramidal layer, while the WSB strain shows greater; DBA and PWD strains show lower density and intensity of expression in the dentate gyrus, while the Spret strain shows greater

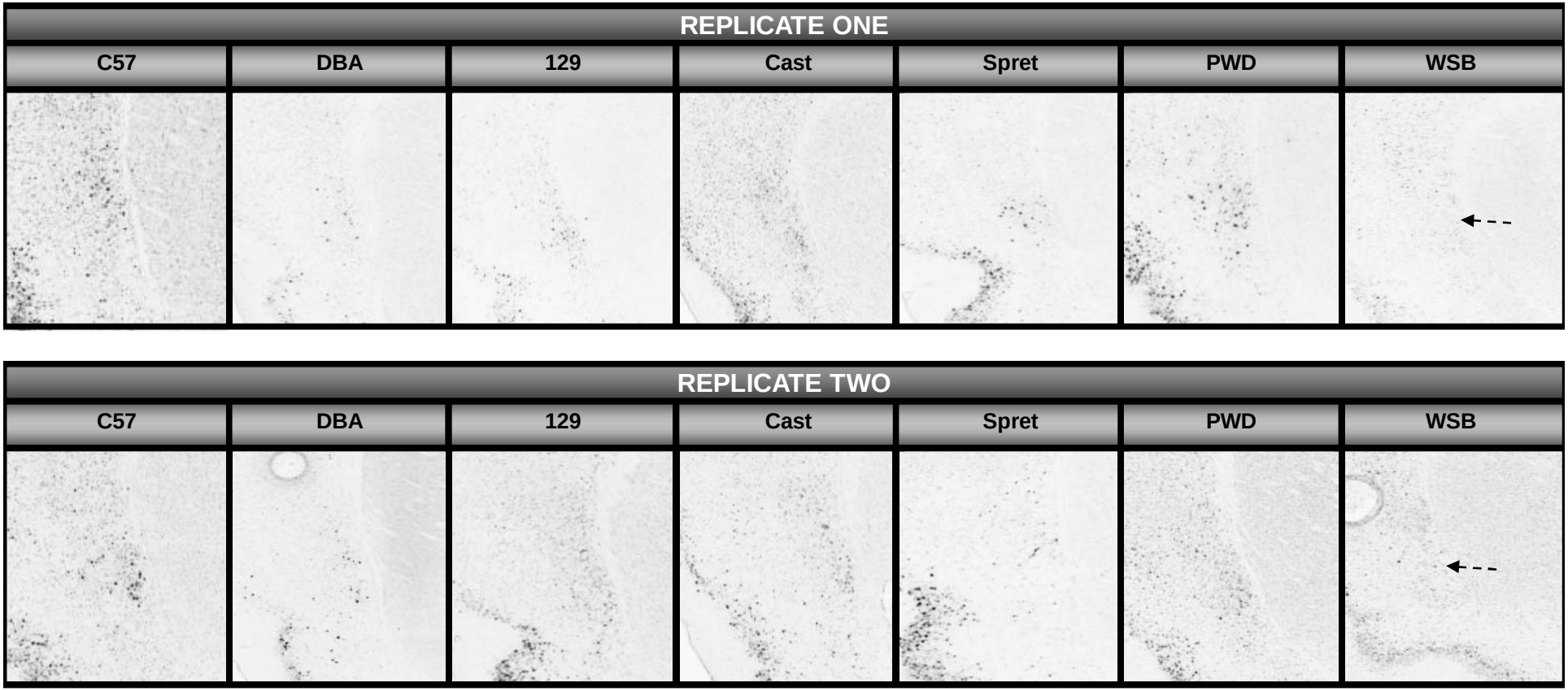
Ptgs2



VIS(2/3): DBA, WSB < …

The DBA and WSB strains show lower density of prostaglandin-endoperoxide synthase 2 (Ptgs2) expression in the superficial portion of layer 2/3 of the visual cortex

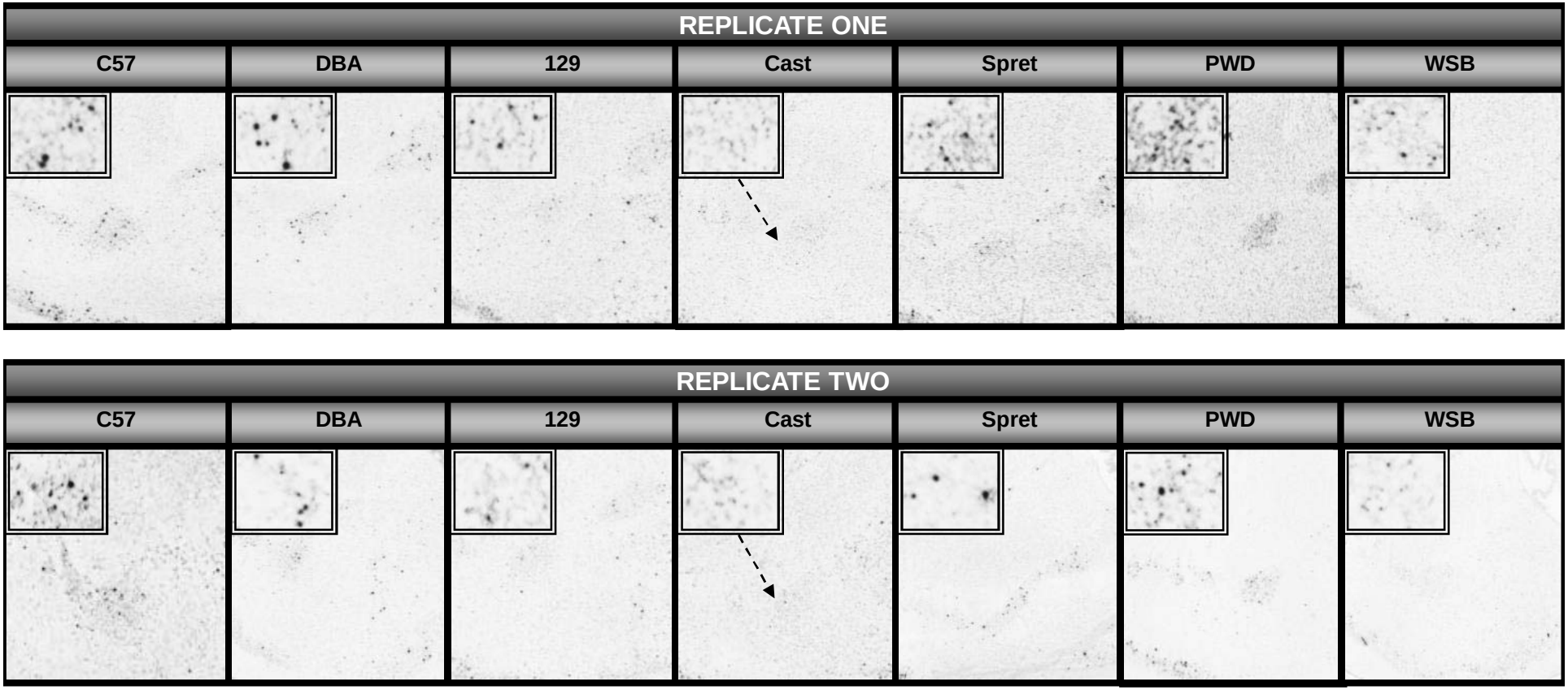
Ptgs2



CLA: WSB < …

The WSB strain shows lower density and intensity of prostaglandin-endoperoxide synthase 2 (Ptgs2) expression in the claustrum

Ptgs2



IA: Cast < …

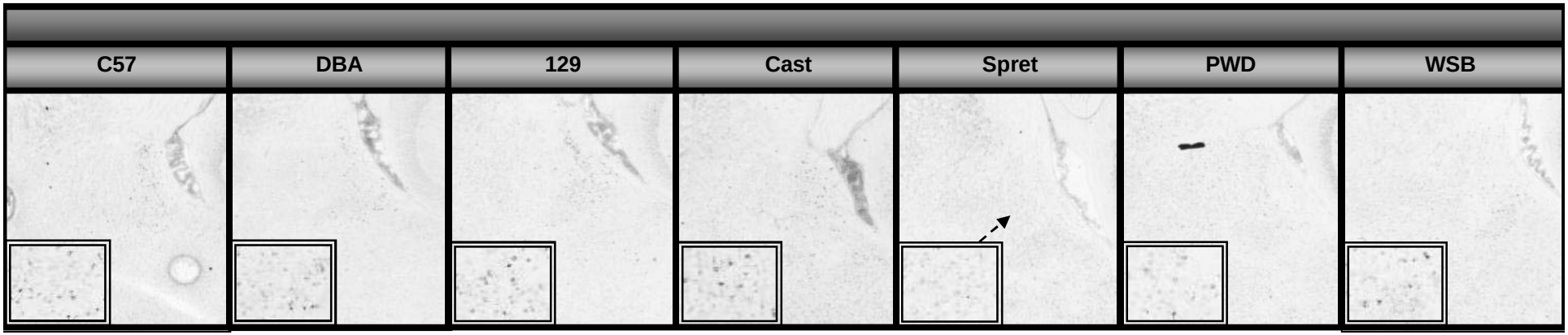
The Cast strain shows lower density of prostaglandin-endoperoxide synthase 2 (Ptgs2) expression in the intercalated amygdalar nucleus

Scn10a

EPd: … < C57

The C57 strain shows greater density and intensity of sodium channel, voltage-gated, type X, alpha (Scn10a) expression in the endopiriform nucleus, dorsal part

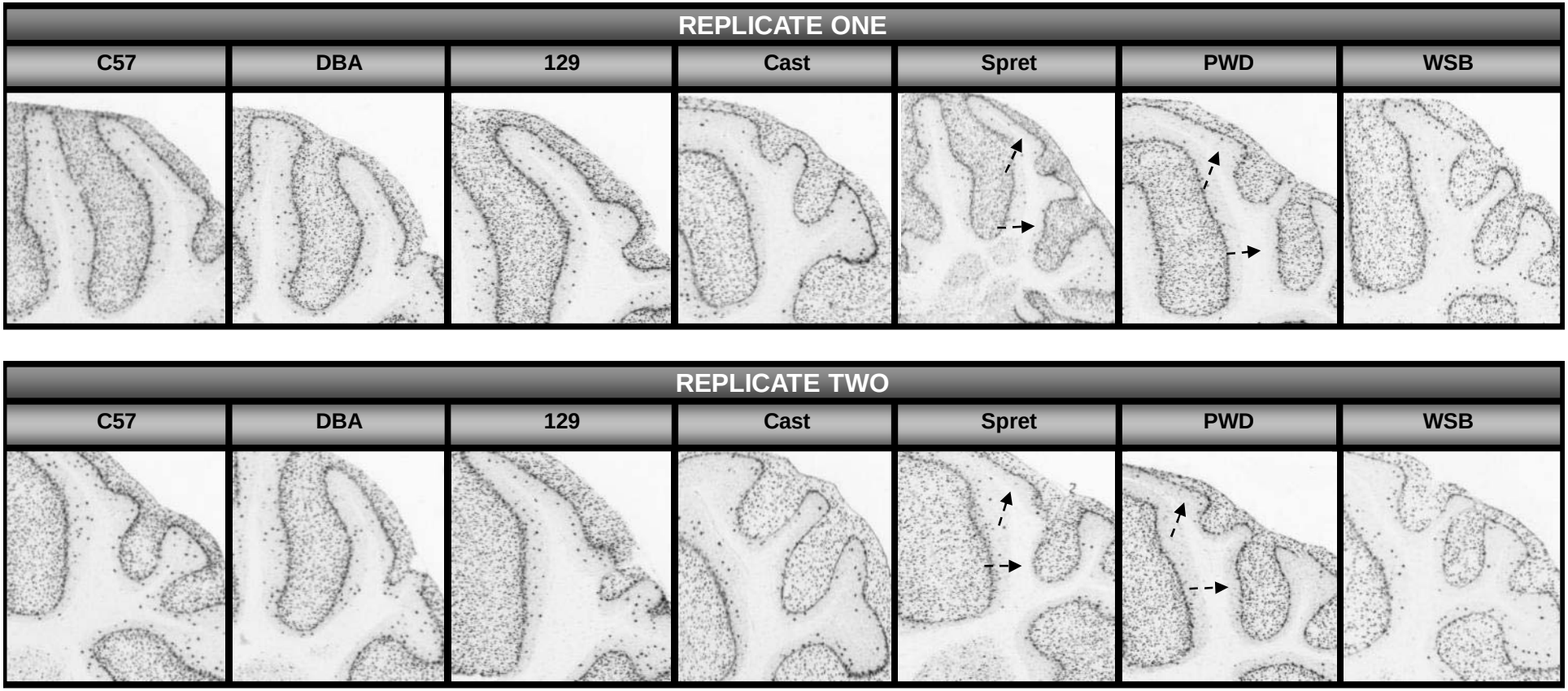
Scn10a



CEA: Spret < …

The Spret strain shows lower density of sodium channel, voltage-gated, type X, alpha (Scn10a) expression in the central amygdalar nucleus

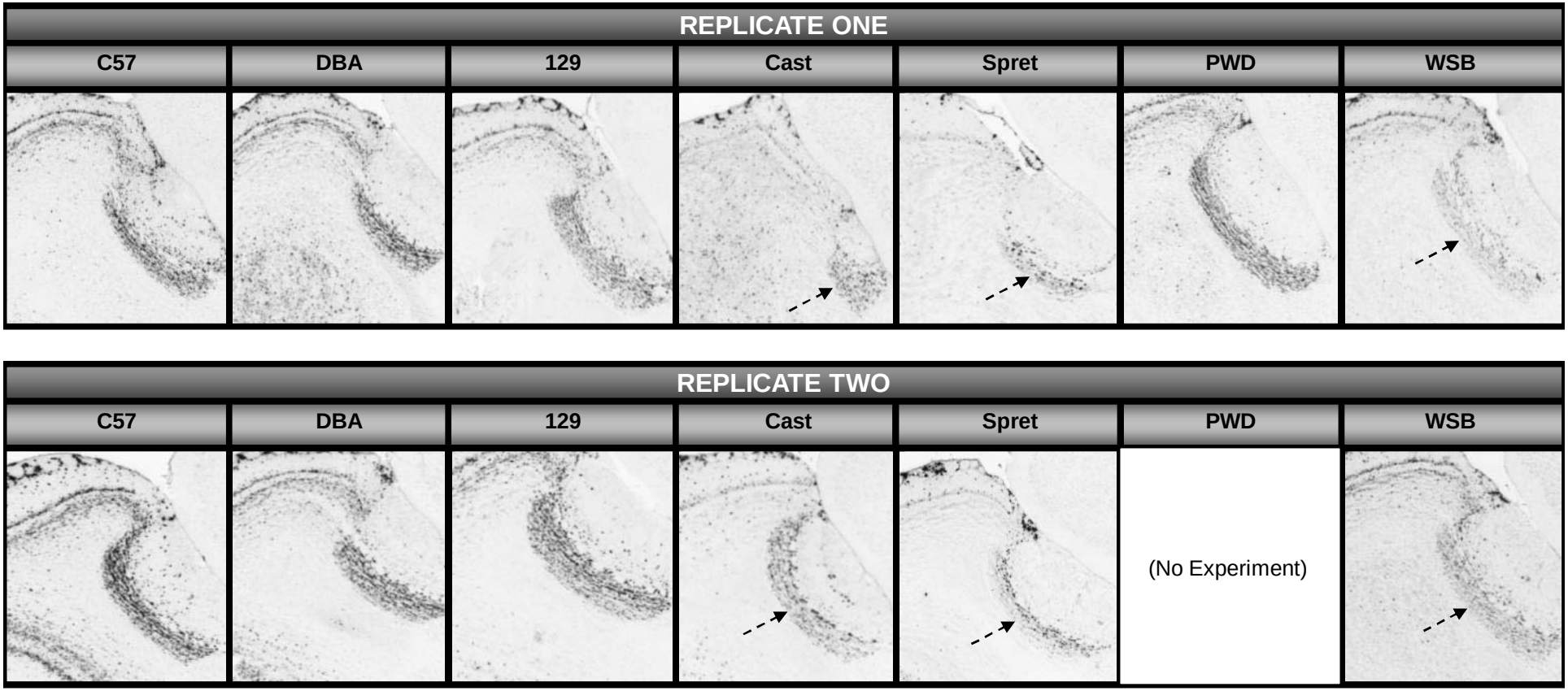
Slc6a1



CBX(mo): Spret, PWD < …

The Spret and PWD strains show lower density of solute carrier family 6, member 1 (Slc6a1) expression in the molecular layer of the cerebellar cortex

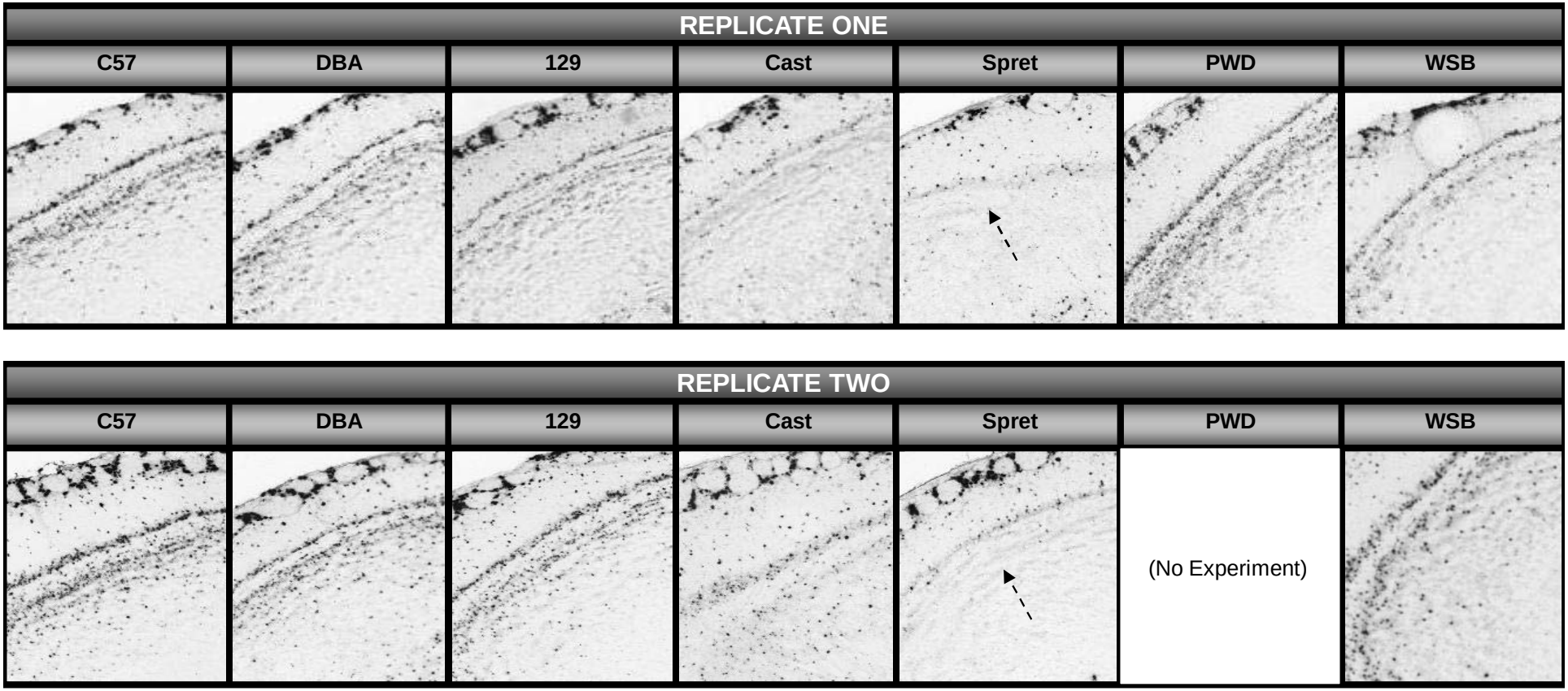
Th



AOBgr: Cast, Spret, WSB < …

The Cast, Spret and WSB strains show lower density of tyrosine hydroxylase (Th) expression in the accessory olfactory bulb, granule layer

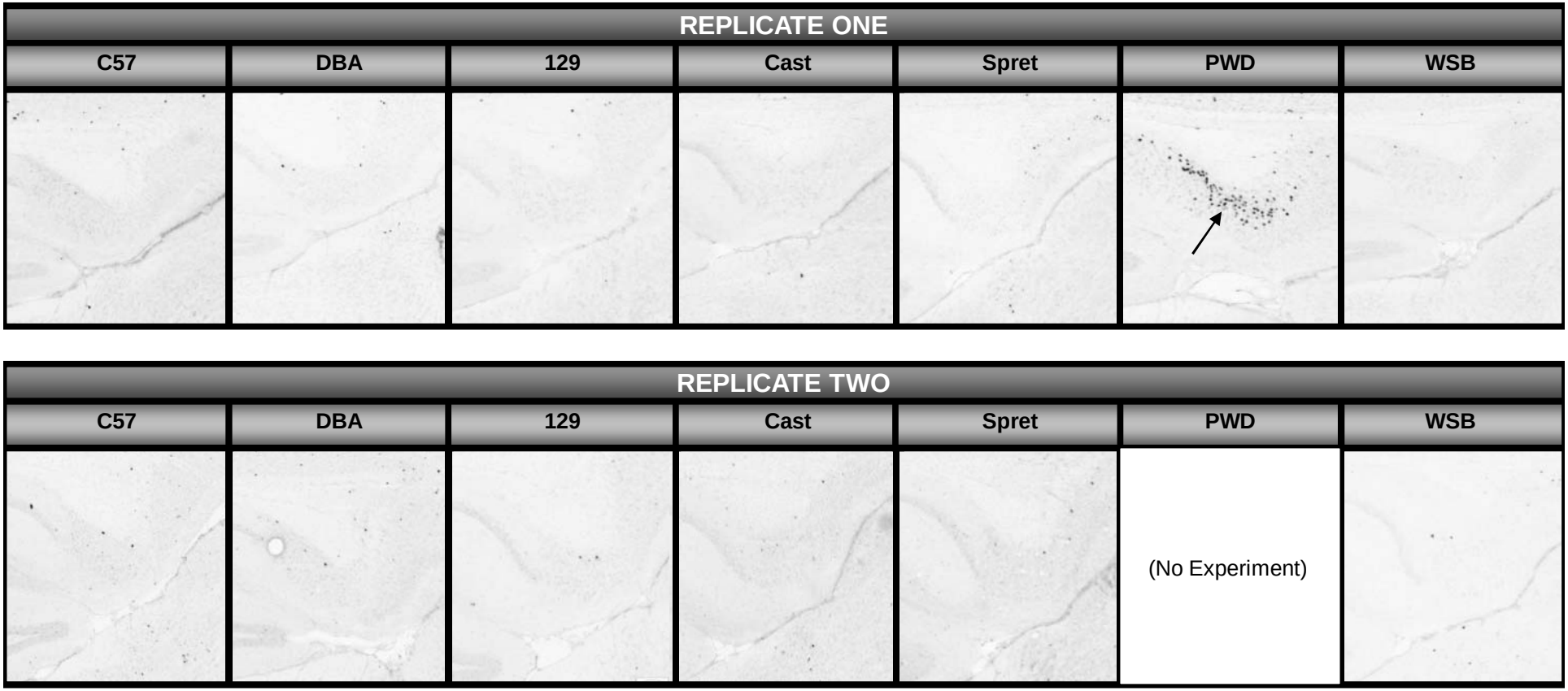
Th



MOBgr: Spret < …

The Spret strain shows lower density and intensity of tyrosine hydroxylase (Th) expression in the main olfactory bulb, granule layer

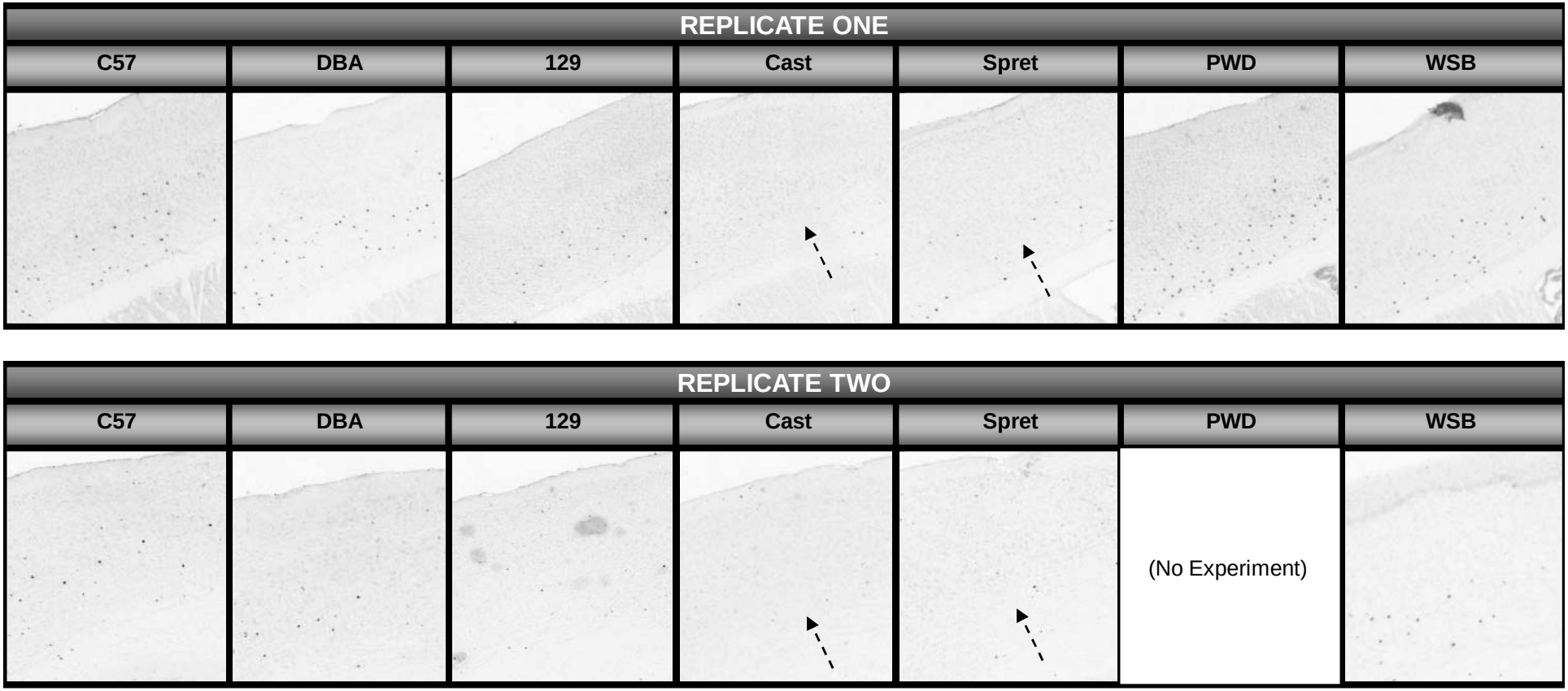
Th



SUB: … < PWD

The PWD strain shows greater density of tyrosine hydroxylase (Th) expression in the subiculum

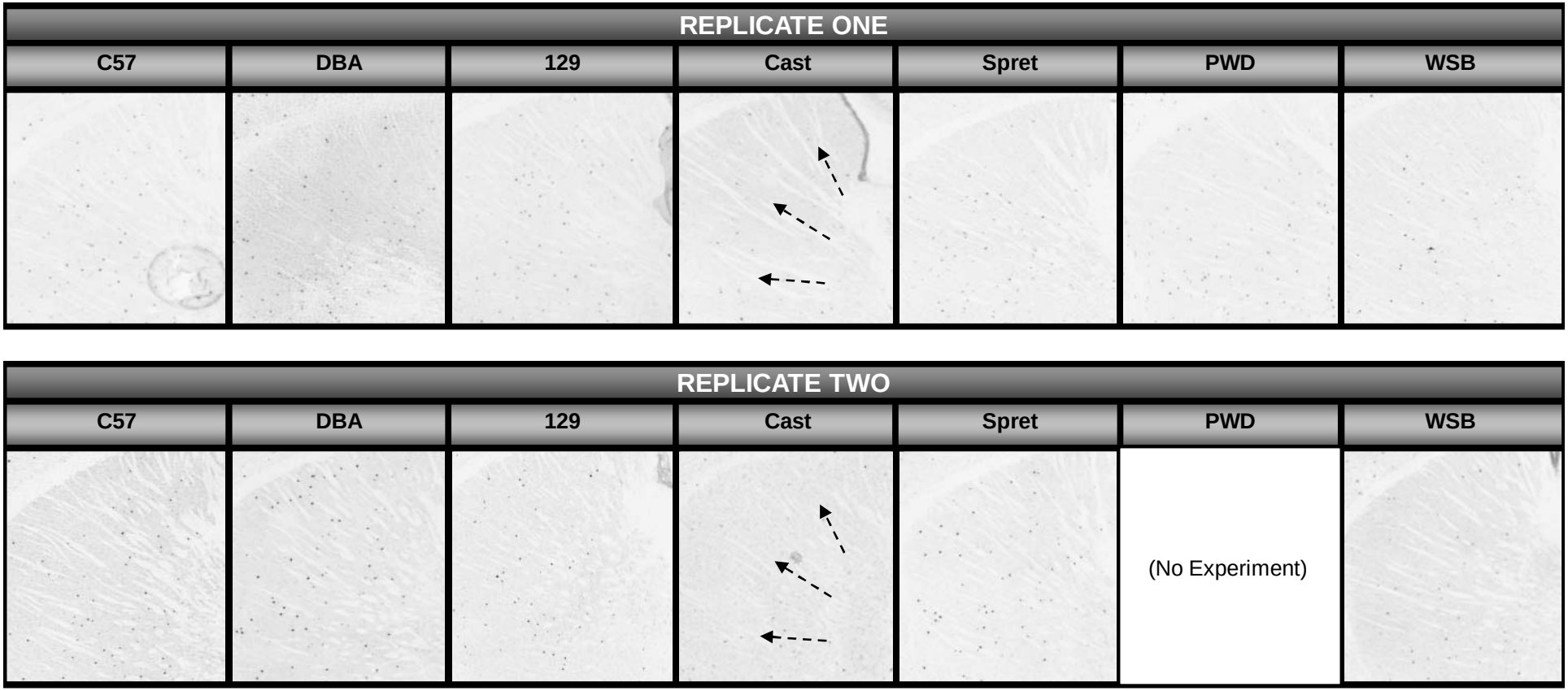
Th



CTX(6a): Cast, Spret < …

The Cast and Spret strains show lower density of tyrosine hydroxylase (Th) expression in layer 6 of the cerebral cortex

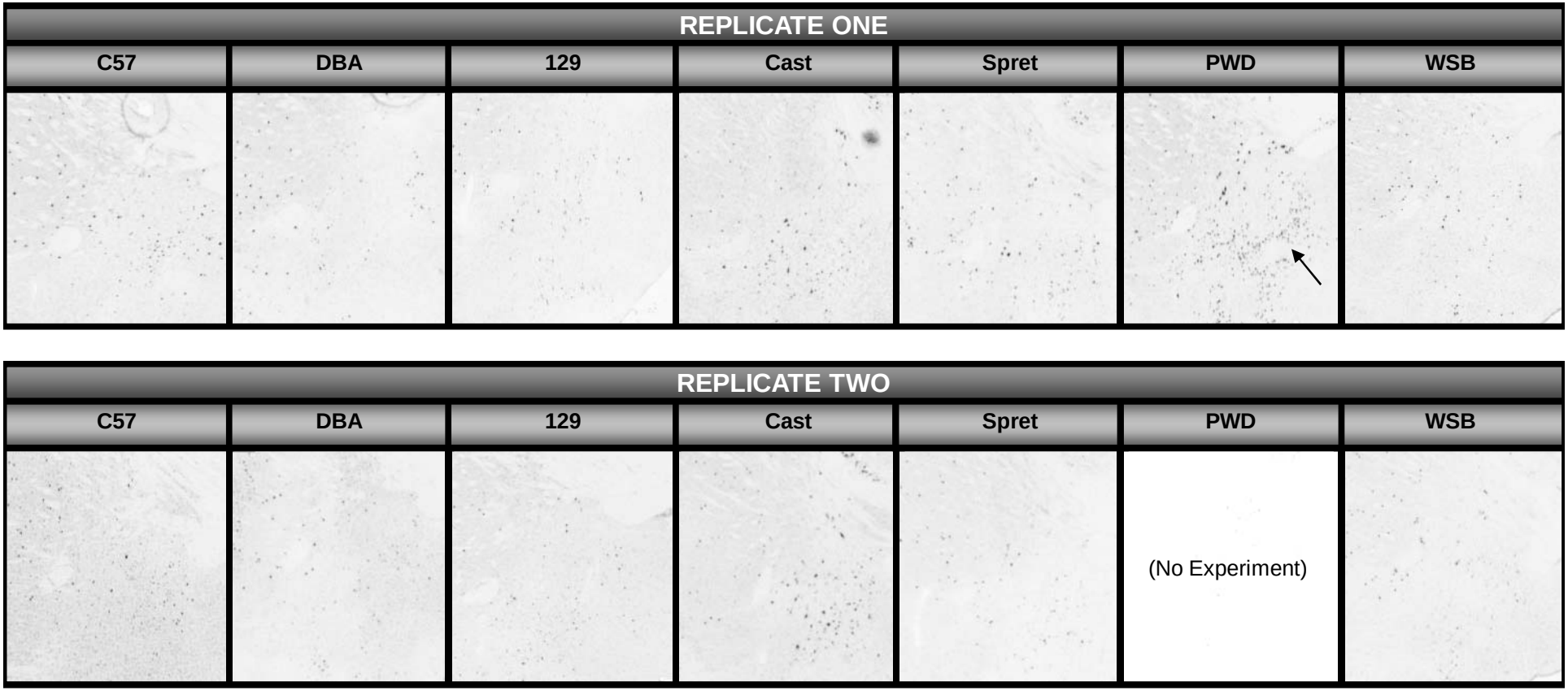
Th



CP: Cast < …

The Cast strain shows lower density of tyrosine hydroxylase (Th) expression in the caudate putamen

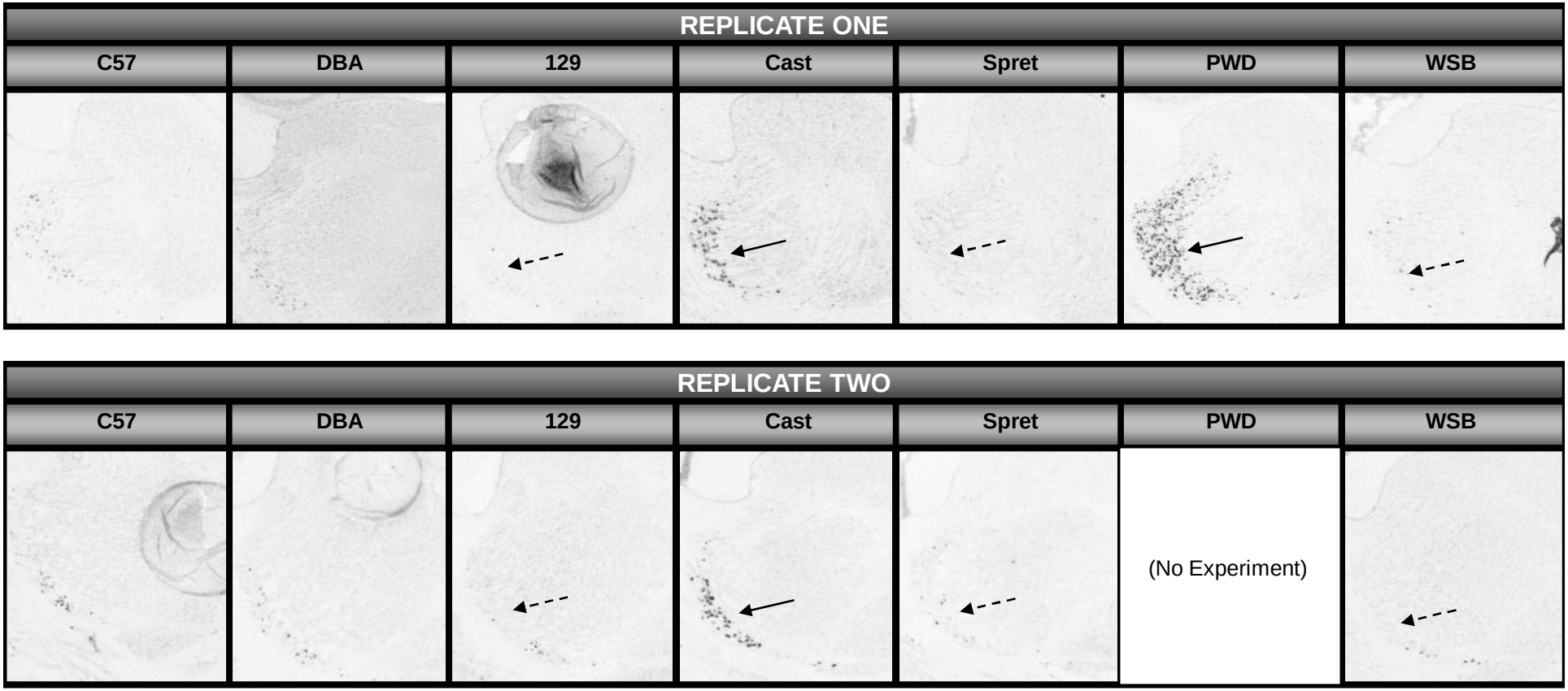
Th



MEA: … < PWD

The PWD strain shows greater density and intensity of tyrosine hydroxylase (Th) expression in the medial amygdalar

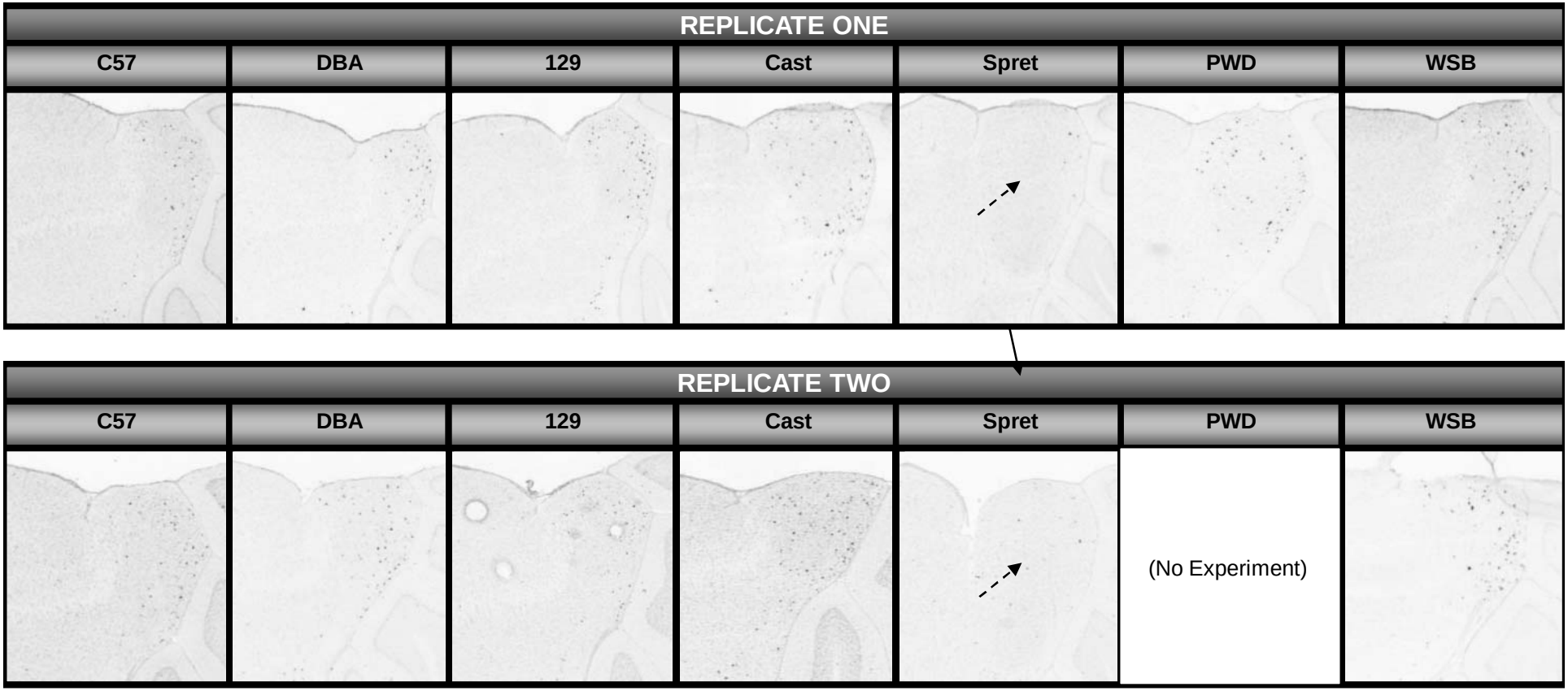
Th



RT: 129, Spret, WSB < … < Cast, PWD

The 129, Spret and WSB strains show lower density and intensity of tyrosine hydroxylase (Th) expression in the reticular nucleus of the thalamus; the Cast and PWD strains show greater

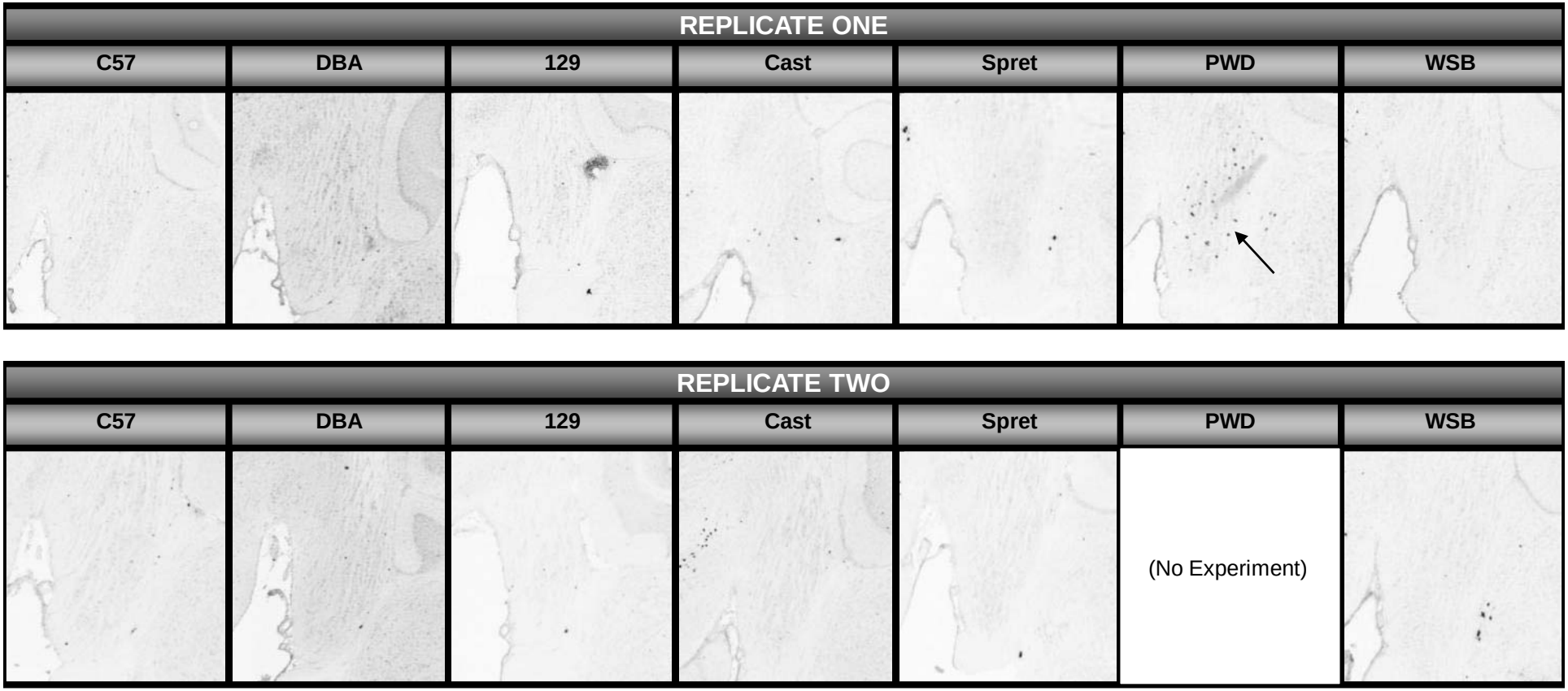
Th



IC: Spret < …

The Spret strain shows lower density of tyrosine hydroxylase (Th) expression in the inferior colliculus

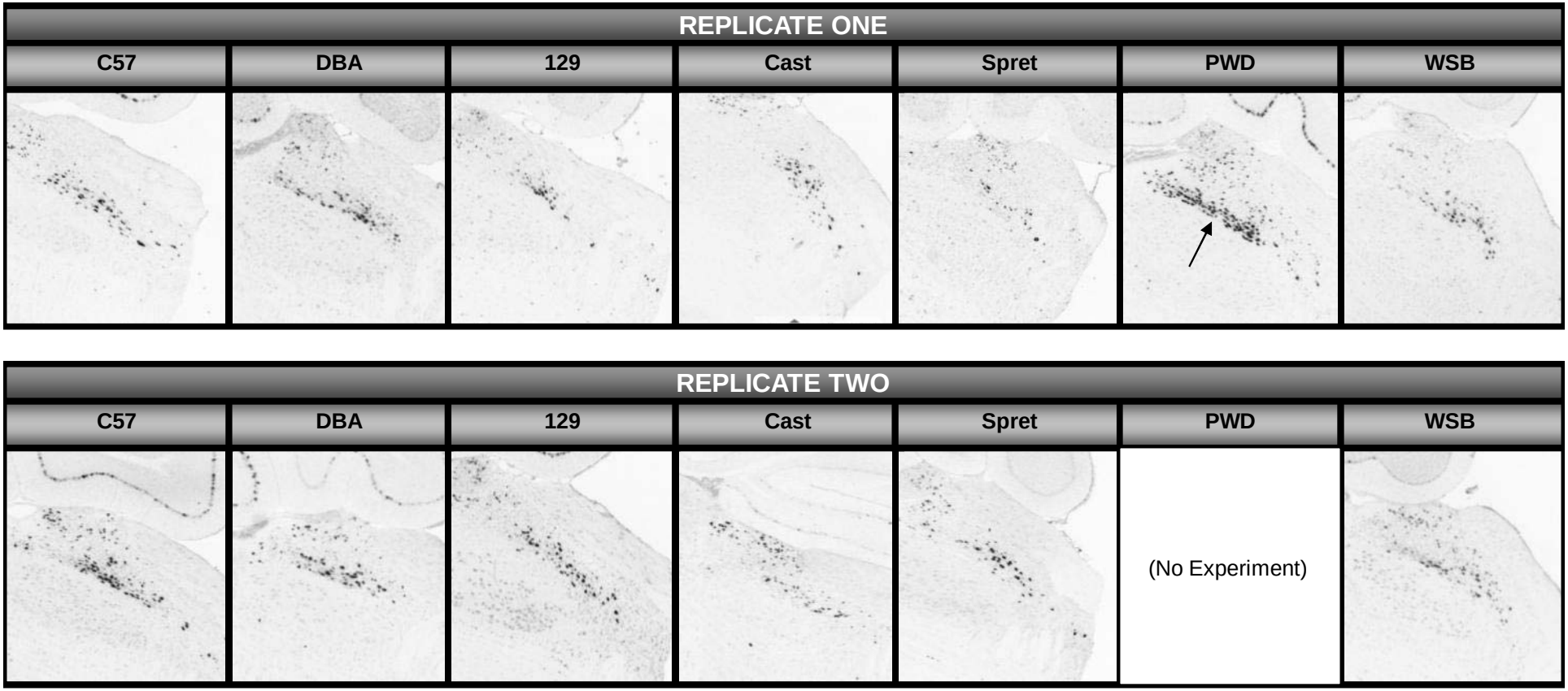
Th



NLL: ... < PWD

The PWD strain shows greater density and intensity of tyrosine hydroxylase (Th) expression in the nucleus of the lateral lemniscus

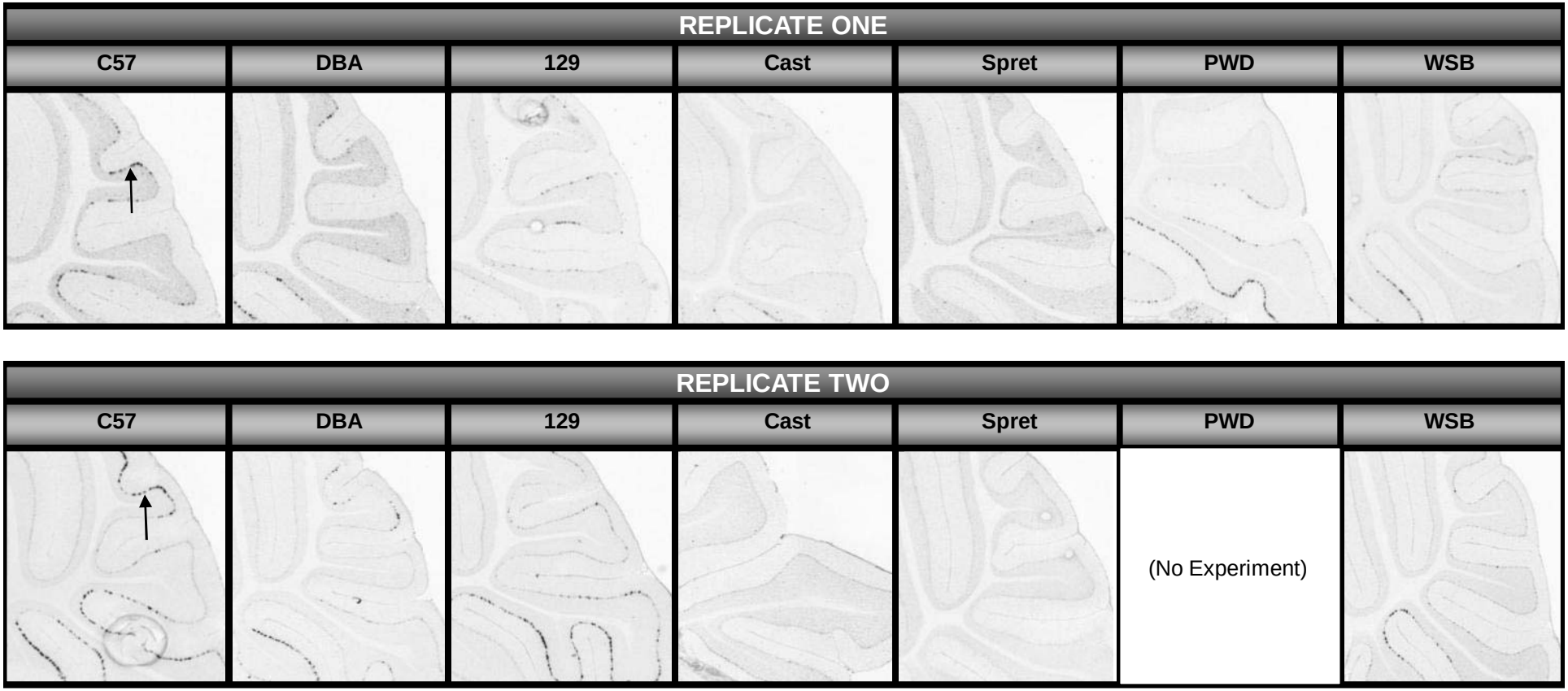
Th



DMX: … < PWD

The PWD strain shows greater density of tyrosine hydroxylase (Th) expression in the dorsal motor nucleus of the vagus

Th



CBX(purk): … < C57

The C57 strain shows greater density of tyrosine hydroxylase (Th) expression in the purkinje layer of the cerebellar cortex

SUMMARY

- 49 DRUG TARGETS -

Page	Gene	Structure	Region	DBA	129	Cast	Spret	PWD	WSB
2	Ache	PO	TH	+			+		+
3	Ache	CBX(gr)	CB					+	
4	Adra2a	DG(po)	HPF						+
5	Adra2a	CBX(gr)	CB					+	
6	Agtr1a	PVH	HY				-	-	
7	Bche	ENTm	HPF				-	-	
8	Bche	AD	TH			+			+
9	Bche	LD	TH			+		+	
10	Bche	AV	TH			+			
11	Bche	RE	TH			+		+	
12	Bche	MH	TH			+			
13	Bche	PCG	P				-		
14	Bche	DMX	MY				-		
15	Cyp19a1	LS	SUBC				-	+	-
16	Drd1a	CA2sp	HPF	+	+				
17	Drd1a	AD	TH				+		
18	Drd1a	PB	P			-			
19	Drd2	ENTl	HPF	+					
20a	Drd2	LD	TH	-		-	-		
20b	Drd2	AV	TH			-	-		
21	Egfr	DG(sg)	HPF			+			
22	Egfr	PA	CTX			+			
23	Egfr	LSc	SUBC			+	+		
24	Egfr	SCs	MB				+		
25	Esr1	COAp	OLF				-		
26a	Esr1	CA2sp	HPF					+	
26b	Esr1	DG(po)	HPF					+	
27	Esr1	MO(2/3)	CTX	+					
28	Esr1	PIR(2)	OLF				+		
29	Esr1	DR	MB				-		
30	Esr1	AP	MY				-		
31	Esr2	CLA	CTX	+		+	-		
32	Esr2	BLA	CTX				-	-	
33	Esr2	RE	TH				+	+	
34	Esr2	SCN	HY				+		
35	Faah	AOBmi	OLF			-			
36	Gabra3	CBX(gr)	CB					+	
37	Gabrb1	SCs	MB				-		
38	Gnrh1	MPO	HY			-			
39	Hrh1	SCs	MB			+			
40	Htr1a	AOB	OLF					+	+
41	Htr1a	MOBmi	OLF			-		-	
42	Htr1a	CA3sp	HPF			+	+		
43	Htr1a	SUB	HPF				+	+	

Page	Gene	Structure	Macro	DBA	129	Cast	Spret	PWD	WSB
44	Htr1a	VIS(5)	CTX				-		
45	Htr1a	RSPd(5)	CTX				-		
46	Htr1a	CP	SUBC			+	+		
47	Htr1a	FN	CB				-		
48	Htr1b	PIR(2)	OLF				-	+	
49	Htr1b	DG(po)	HPF	+	+	+	+	+	+
50	Htr1b	POST	HPF					+	
51	Htr1b	AV	TH				-		
52	Htr2a	MO(2/3)	CTX			-			
53	Htr2a	AD	TH			-			
54	Maob	MOBmi	OLF					+	
55	Maob	MO(2/3)	CTX					+	
56	Maob	CTX(6b)	CTX				-		
57	Maob	LA	CTX					+	+
58	Maob	LSr	SUBC			+			
59	Maob	RE	TH				+		
60	Oprm1	CP	SUBC					+	
61	Oprm1	MS	SUBC					+	
62a	Oprm1	VAL	TH				+		
62b	Oprm1	VPL	TH				+		
63	Pdgfrb	PF	TH						-
64	Ppp3ca	MG	TH	+		+	+		+
65	Ptgs2	TTv	OLF	-		+			
66	Ptgs2	COA	OLF	-					-
67a	Ptgs2	CA3sp	HPF				-		+
67b	Ptgs2	DG	HPF	-			+	-	
68	Ptgs2	VIS(2/3)	CTX	-					-
69	Ptgs2	CLA	CTX						-
70	Ptgs2	IA	SUBC			-			
71	Scn10a	Epd	CTX	-	-	-	-	-	-
72	Scn10a	CEA	SUBC				-		
73	Slc6a1	CBX(mo)	CB				-	-	
74	Th	AOBgr	OLF			-	-		-
75	Th	MOBgr	OLF				-		
76	Th	SUB	HPF					+	
77	Th	CTX(6a)	CTX			-	-		
78	Th	CP	SUBC			-			
79	Th	MEA	SUBC					+	
80	Th	RT	TH		-	+	-	+	-
81	Th	IC	MB				-		
82	Th	NLL	P					+	
83	Th	DMX	MY					+	
84	Th	CBX(purk)	CB	-	-	-	-	-	-