

## SUPPLEMENTARY MATERIAL

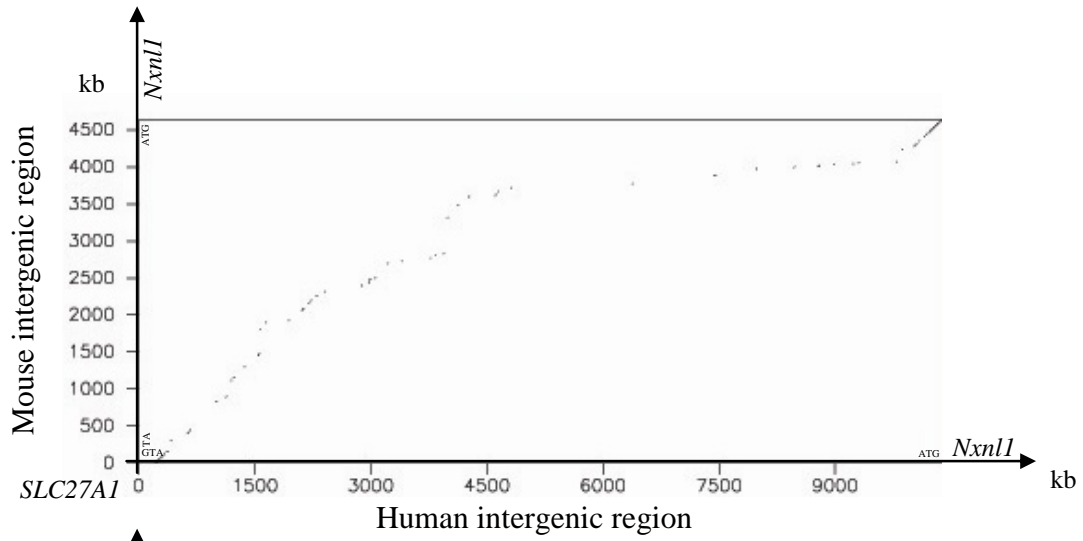
**Supplementary Figure 1.** DotPlot analysis of the 5' upstream region of Nucleoredoxin-like 1 genes. The DotPlot compares two sequences according to their homologies on this representation. Each point shows a sequence homology at the corresponding coordinates. (A) Human and mouse DotPlot. (B) Human and rat DotPlot. (C) Mouse and rat DotPlot. The aligned regions correspond to the intergenic sequences between the ATG of *Nxn11* gene and *SLC27A1*, a gene located in the 5' direction of *Nxn11* in each species. The analysis was done with the Software \*dotpath\* (EMBOSS, parameter: word size = 4)

**Supplementary Figure 2.** Localization of Neuropilin 2 by binding of its ligand the semaphoring III/F. (A) Western Blot determining the production the recombinants proteins Alkaline Phosphatase (AP-Tag) and Semaphorin III/F fused with the alkaline Phosphatase (AP-SemaIII/F), in Cos-1 Cells. The human *SemaIII/F* has been cloned in the APtag1, vector previously descript (68). (B) Binding Assay. The recombinants proteins were applied on C57BL6@N mouse retinal sections at PN35 using the AP-TAG<sup>TM</sup> Kit B (GenHunter Corp.). Only the ganglion cells were marked with AP-*SemaIII/F* protein, localizing its cell surface receptor the Neuropilin 2. ONL, Outer Nuclear Layer; INL, Inner Nuclear Layer; GCL, Ganglion cells Layer. Bar scale 50  $\mu$ m.

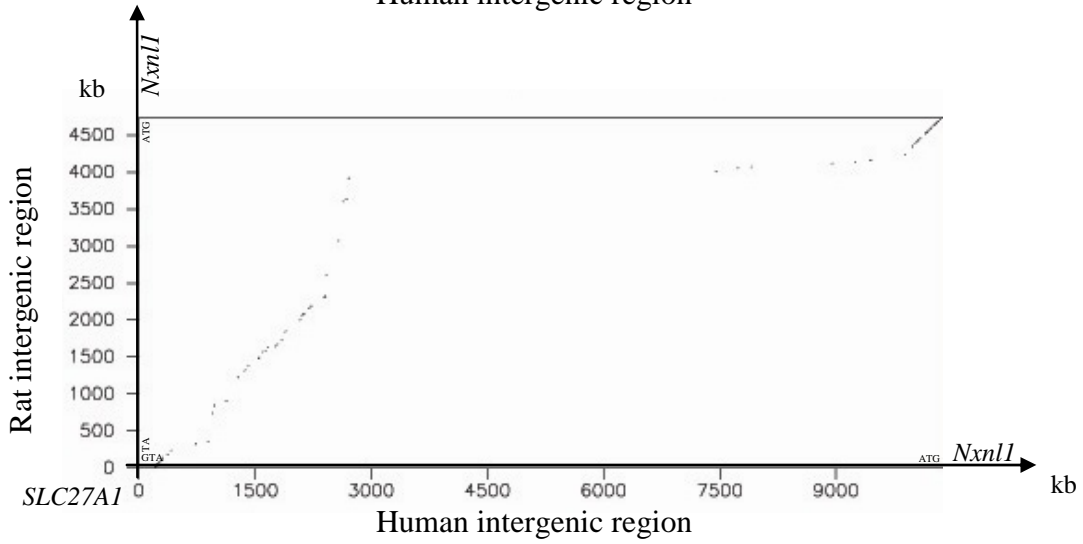
**Supplementary Table 1.** The 133 transcription factors predicted to bind an element within the 4.2 kb 5' upstream region of the *Nxn11* gene.

# Supplementary Figure 1

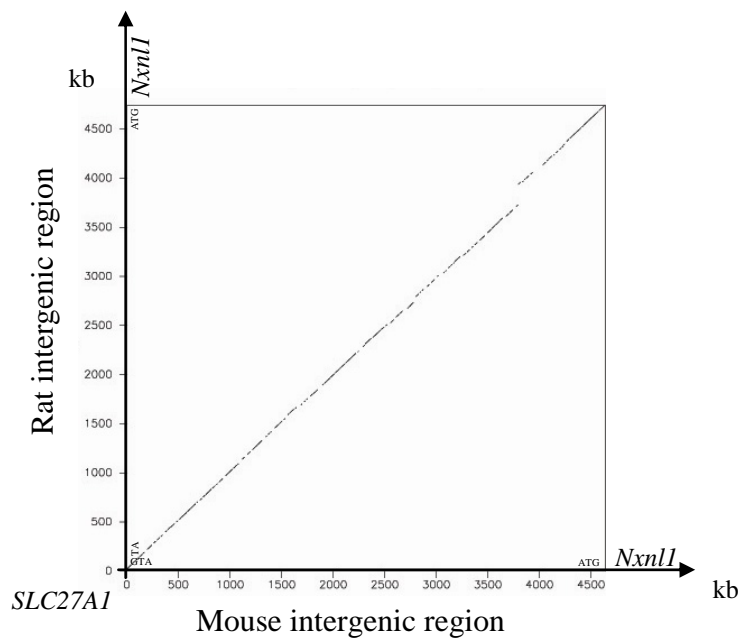
## A



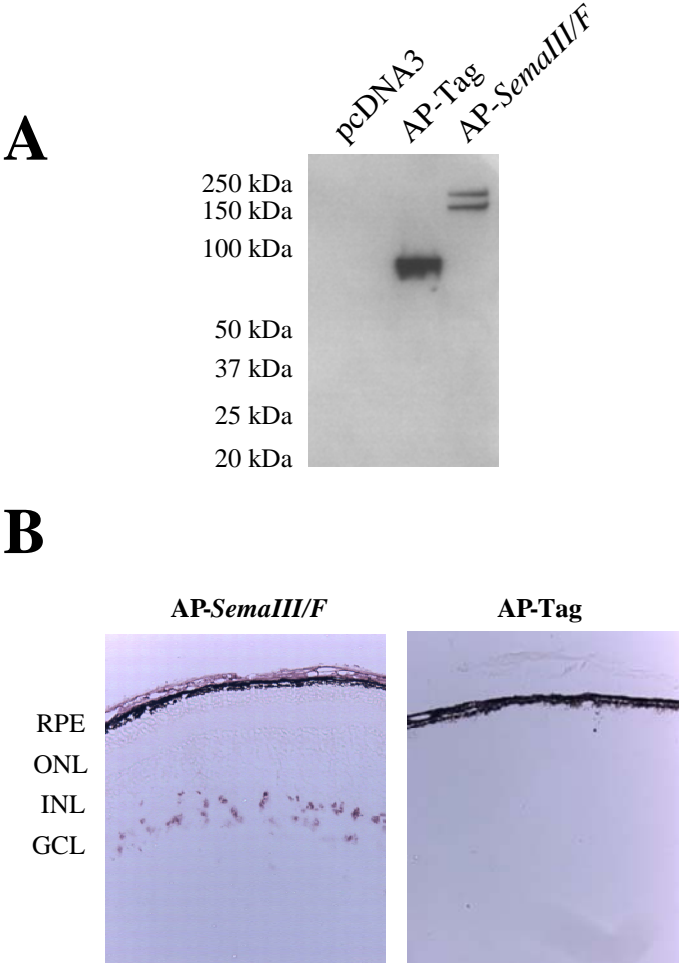
## B



## C



Supplementary Figure 2



**Supplementary Table 1.**

Gene ID NCBI	Gene Name	Gene Symbol
11622	aryl-hydrocarbon receptor	Ahr
11634	autoimmune regulator (autoimmune polyendocrinopathy candidiasis ectodermal dystrophy)	Aire
23983	poly(rC) binding protein 1	alpha-Cp1 / Pcbp1
11695	aristaless-like homeobox 4	Alx-4
4205	myocyte enhancer factor 2A	Mef2a
21418	transcription factor AP-2, alpha	Ap2 / Tcfap2a
16597	Kruppel-like factor 12	Ap2rep / Klf12
11774	adaptor-related protein complex 3, beta 1 subunit	Ap3b1 / Ap3
83383	transcription factor AP4	Tcfap4 / Ap4
11835	androgen receptor	Ar
11819	nuclear receptor subfamily 2, group F, member 2	Arp1 / Nr2f2
11911	activating transcription factor 4	Atf4
12014	BTB and CNC homology 2	Bach2
20997	brachyury	Brachyury / T
12611	CCAAT/enhancer binding protein (C/EBP), gamma	C/Ebpgamma / Cebpg
13052	coxsackie virus and adenovirus receptor	Cxadr / Car
12358	cartilage homeo protein 1	Cart1
71702	cell division cycle 5-like (S. pombe)	Cdc5
13047	cut-like homeobox 1	Cux1 / Cutl1 / Cdp
12590	caudal type homeo box 1	Cdx1
211151	churchill domain containing 1	Churchill / Churc1
12677	visual system homeobox 2	Chx10 / Vsx2
252877	nuclear matrix protein 4	Ciz / Nmp4
17863	myeloblastosis oncogene	c-Myb / Myb
17187	Max protein	c-Myc:Max / Max
21422	transcription factor CP2	Tcfcp2 / Cp2
12951	cone-rod homeobox containing gene	Crx
54006	deformed epidermal autoregulatory factor 1 (Drosophila)	Deaf1
21417	zinc finger E-box binding homeobox 1	Zeb1 / deltaEf1
1403641	regulatory protein E2	E2
13555	E2F transcription factor 1	E2f1
13560	E4F transcription factor 1	E4f1
13653	early growth response 1	Egr1 / Krox
13712	ELK1, member of ETS oncogene family	Elk1
13798	engrailed 1	En1
104035	repeated epilation	Er
21677	TEA domain family member 2	Tead2 / Etf

14013	ecotropic viral integration site 1	Evi1
2186	bromodomain PHD finger transcription factor	Fac1 / Bptf
20371	forkhead box P3	Foxp3
14463	GATA binding protein 4	Gata4
14531	glial cells missing homolog 1	Gcm
14536	nuclear receptor subfamily 6, group A, member 1	Gcnf / Nr6a1
209334	Gen homolog 1, endonuclease (Drosophila)	Gen
14581	growth factor independent 1	Gfi1
14781	grizzled	Gr
15110	heart and neural crest derivatives expressed transcript 1	Hand1
18071	nescient helix loop helix 1	Nhlh1 / Hen1
217082	hepatic leukemia factor	Hlf
15361	high mobility group AT-hook 1	Hmga1 / Hmg ly
21405	HNF1 homeobox A	Hnf1a / Hnf1
2305	forkhead box M1	Hnf-3 / Foxm1
171302	forkhead box E3	Hnf-3 / Foxe3
15378	hepatic nuclear factor 4, alpha	Hnf4a
15379	one cut domain, family member 1	Hnf-6 / Onecut1
12419	chromobox homolog 5 (Drosophila HP1a)	Cbx5 / Hp1
15499	heat shock factor 1	Hsf / Hsf1
18609	pancreatic and duodenal homeobox 1	Pdx1 / Ipf1
54123	interferon regulatory factor 7	Irf7
16476	Jun oncogene	Jun / Ap1
16842	lymphoid enhancer binding factor 1	Lef1
85437	ZCRB1 zinc finger CCHC-type and RNA binding motif 1	Lf-a1 / Zcrb1
16871	LIM homeobox protein 3	Lhx3
14238	forkhead box F2	Foxf2 / Lun1
22260	nuclear receptor subfamily 1, group H, member 2	Lxr / Nr1h2
22778	IKAROS family zinc finger 1	Lyf1
17132	avian musculoaponeurotic fibrosarcoma (v-maf) AS42 oncogene homolog	Maf
56218	POZ (BTB) and AT hook containing zinc finger 1	Mazr
17260	myocyte enhancer factor 2C	Mef2c / Mef2
15405	homeo box A9	Hoxa9
17268	Meis homeobox 1	Meis1a
237412	predicted gene, EG237412	Mif1
71371	AT rich interactive domain 5B (MRF1-like)	Arid5b / Mrf2
17764	metal response element binding transcription factor 1	Mtf1
17928	Myogenin	Myog
18015	neurofibromatosis 1	Nf1
21909	T-cell leukemia, homeobox 2	Ncx / Tlx2
307820	nuclear factor of activated T-cells 5	Nfat5 / Nf-at

18030	nuclear factor, interleukin 3, regulated	Nfil3 / E4bp4
18033	nuclear factor of kappa light polypeptide gene enhancer in B-cells 1, p105	NF-kappaB / Nfkb1
13591	early B-cell factor 1	Ebf1 / Olf1
18519	K(lysine) acetyltransferase 2B	p300 / Pcaf / Kat2b
22059	transformation related protein 53	p53 / Trp53
18506	paired box gene 4	Pax4
5037	phosphatidylethanolamine binding protein 1	Pebp
18736	POU domain, class 1, transcription factor 1 (Pit1, growth hormone factor 1)	Pit1
18771	Pbx/knotted 1 homeobox	Pknox1 / Pbx
18986	POU domain, class 2, transcription factor 1	Pou2f1 / Oct1
19013	peroxisome proliferator activated receptor alpha	Ppar
18667	progesterone receptor	Pr
18171	nuclear receptor subfamily 1, group I, member 2	Pxr
217371	Rab40b, member RAS oncogene family	Rar
19724	regulatory factor X, 1	Rfx1
104336	zinc finger protein 104	Roaz
19401	retinoic acid receptor, alpha	Rara / Roralpha1 / Rora
30928	zinc finger protein 238	Zfp238 / Rp58
68750	ras responsive element binding protein 1	Rreb1 / Rreb1
20181	retinoid X receptor alpha	Rxra
20186	nuclear receptor subfamily 1, group H, member 4	Fxr / Nr1h4
20204	paired related homeobox 2	Prrx2 / S8
26423	nuclear receptor subfamily 5, group A, member 1	Sf1
17128	MAD homolog 4	Smad4
20682	SRY-box containing gene 9	Sox9
20683	trans-acting transcription factor 1	Sp1
20687	trans-acting transcription factor 3	Sp3
79401	spermatogenic leucine zipper 1	Spz1
20787	sterol regulatory element binding transcription factor 1	Srebp1 / Sreb1
20807	serum response factor	Srf
21674	sex determining region of Chr Y	Sry
20841	zinc finger protein 143	Staf / Zfp143
20850	signal transducer and activator of transcription 5A	Stat5a
20892	stimulated by retinoic acid 13	Stra13
21423	transcription factor E2a	Tcfe2a / E47
21406	transcription factor 12	Tcf12 / Heb
21685	thyrotroph embryonic factor	Tef
21676	TEA domain family member 1	Tead1 / Tef1
83602	general transcription factor II A, 1	Gtf2a / Tfla
14886	general transcription factor II I	Gtf2i / TflI-I

21815	TGFB-induced factor homeobox 1	Tgif
499766	transcription termination factor, RNA polymerase I	Ttf1
22278	upstream transcription factor 1	Usf1
22282	upstream transcription factor 2	Usf2
22337	vitamin D receptor	Vdr
217166	nuclear receptor subfamily 1, group D, member 1	Nr1d1 / vErbA
15218	forkhead box N1	Foxn1 / Whn
50505	excision repair cross-complementing rodent repair deficiency, complementation group 4	Ercc4 / Xpf1
394455	VENT homeobox 1, gene 2	Xvent1
22632	YY1 transcription factor	Yy1
21417	zinc finger E-box binding homeobox 1	Zeb1 / Areb6
22666	zinc finger protein 161	Zfp161 / Zf5
22772	zinc finger protein of the cerebellum 2	Zic2
241322	zinc finger and BTB domain containing 6	Zbtb6 / Zid
3783744	bZIP transcription factor	Zta / Bzlf1

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