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Supplemental information

**Isoform requirement of clustered protocadherin
for preventing neuronal apoptosis
and neonatal lethality**

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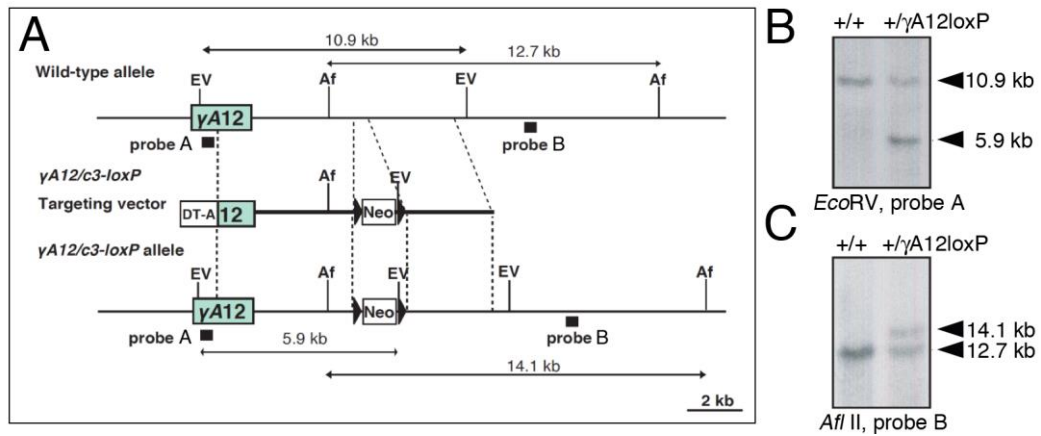


Figure S1. Design of a $\gamma A12/C3-loxP$ targeting construct, related to Figure 1.

(A) Diagram showing the $\gamma A12/C3-loxP$ targeting constructs. EV: EcoRV, Af: AflIII. Filled triangles represent *loxP* sites. (B) Southern blot of homologous recombinant ES cells digested by EcoRV, with probe A. (C) Southern blot of homologous recombinant ES cells digested by AflIII, with Probe B.

Table S1. List of oligonucleotides, related to STAR Methods.

Probe sequences used for southern blot.

Name	Sequence: (+)-strand
Probe A	CAGCGAAAGTTTTCAAGCTGGACAGTAACTTGGGGACAATATCAACAATAG GGGAGCTGAATCATGAAGAATCGGGGTGCAACGACAACGCACCTGCGTTT GCTCGGTCCGAGTACCGCGTGAGCGTGCGGGGAGAACGTGGCTGTGGGCA CTCAGCTGCTGCTGGTCAACGCCACCGACCCAGACGAAGGCGCCAATGCG GAAGTGATCTATTCTTCCGGTACGTGGACGACAAGGTCTACGAGATGGAG GTGCAAGCTACAGATAACGCGGGGATATTCTGCACGGGCCAAGGTCCTGGT CACAGTTC
Probe B	CCTGTGAAACAGCTCCGTCATGACAGCTAGCTTCCATCAGACCAAGCAAAG GAGGGAGCCAGAGAGGGAAAATCTGATAAATGCTTCAATGCTTATGTGAGC CCCAATTTGAAGTGACACGCGTTACTACAAATATATTAGATCATTACAAAC AAAATCATTGCTCCTGCCACACTCAGAAGAGATGAATTTAGTCCACTTA TGATGGTTTTCTGTGTTCTGAGAGGAAACTCCCCTTCTCTTGTCTATTTCAT GTATGGTCGTGGGTCGTGCATCTGTTACAGTAAGATTATTCCATTACTGC TGTATTTTATTTTATCTCAAAGTCTCTAGATT

Primers used for genotyping the mutant mice

Name	Sequence	Purpose
α 1-232F (F1)	TGCAGACCATTGCTGGATGT	Pcdh (common)
gA12C3 intron 4846R (R2)	GCACGTTCCAGGGCGTACATA	Pcdh (TC allele)
Pcdh α 1R1 (R1)	CAATGTCTGCGTCCACGGCG	Pcdh (WT allele)
115F	GCGCGCCAAAGCTTGCATGC	Taf7-tg
115R	CTCTCCCTATAGTGAGTC	Taf7-tg

Primers used for RT-PCR/real-time RT-PCR

Name	Sequence	Purpose
CR2-3'F	CAGTGGCCAACAGTATCCAG	Pcdh α CR
C3-5'	AGGTCCAGCTGTTGCTGTTG	Pcdh α CR
Pcdhb3 real F	CTCTCTTGGTCTGGTAAACTTC	Pcdh β 3
Pcdhb3 real R	GGGATACCATGGCTTGAATTAAGT	Pcdh β 3
Pcdhb21 real F	AAAGCCTGTCTCCCAACCTTG	Pcdh β 21
Pcdhb21 real R	CAGGAACCATGATGAGAGTCAAC	Pcdh β 21
PcdhgA3 real F	CTCAAGATTTACTTGAAACGAAAGAAGACC	Pcdh γ A3
PcdhgB7 real F	GGCACTGTTGGCTAGTATTTTAACTC	Pcdh γ B7
PcdhgC3 real F	CCTGTGTTCTATAGACAGGTGTTG	Pcdh γ C3
PcdhgC4 real F	GTCCACCCTCTGATCTTCTC	Pcdh γ C4
PcdhgC5 real F	GTTCCCGCTCTAGTACGCTG	Pcdh γ C5
Pcdhg constant R3	CAGGTGCCAGTTTCATCACC	Pcdh γ (common)
Gamma cp1 real F	CTGGCGTTTCTCTCAAGCCC	Pcdh γ CR
Pcdhg constant R2	CATGGCTTGACGATCTCTG	Pcdh γ CR
GapdhF3 770-789bp	AATGTGTCCGTCGTGGATCT	GAPDH
GapdhR3 897-916bp	GTTGAAGTCGCAGGAGACAA	GAPDH

Primers used for *in situ* hybridization RNA probes

Name	Sequence	Purpose
Pcdh α 12 forward	CGGGATCCCCTGAAACCAACAAAAC	Pcdh α 12
Pcdh α 12 reverse	CCGCTCGAGGACCTCTGGTGCATTATCA	Pcdh α 12
Pcdh β 22 forward	AAGCTTCGTTGACATCCACCACCTG	Pcdh β 22
Pcdh β 22 reverse	GGCCCCGCCGCTACTTTGTGATGG	Pcdh β 22
Pcdh γ A3 forward	TAGTGGTACCTGTCTCGTCAGCTTTAACATCCTTGTG	Pcdh γ A3
Pcdh γ A3 reverse	TAGTGAGCTCCCCATCCGTGGCTCTTAGAC	Pcdh γ A3
Pcdh γ C3 forward	AACAATCCCTCTTTCCCACCGG	Pcdh γ C3
Pcdh γ C3 reverse	ATGCGCTCCTTCGGGATTGG	Pcdh γ C3
Pcdh γ C4 forward	TAGTGGTACCAGGCTGCAGGTCGCTGG	Pcdh γ C4
Pcdh γ C4 reverse	TAGTACTAGTTGGTAAGTGGTCGGGAATCCG	Pcdh γ C4