

Supplementary Materials

1	MDWGT	LQTI	LGGV	NKHST	SIGKI	WLT	TVLF	IFRIM	hCX26
1	MSWGAL	YAQL	LGGV	NKHST	SLGKI	WLS	SVLF	IFRIC	zCx30.3
35	ILVVA	AKENV	WGDE	QADF	VCN	TLQP	GCKN	VCYD	hCX26
35	ILVIA	AAETV	WGD	EQSD	FTCN	TQQP	GCKN	VCYD	zCx30.3
69	FPISH	IRLW	ALQL	IFVST	PALL	VAMH	VAYR	RHEK	hCX26
69	FPVSH	IRFW	CLQL	IFVST	PALL	VAMH	VAYR	KRNM	zCx30.3
103	KRKFI	KGEIK	SEFK	--D	IEEI	KTKV	RIEG	SLWW	hCX26
103	KKKSI	LAKRG	GNGK	GDD	LES	LKNR	RLPI	TGPL	zCx30.3
135	TYTSS	IFFRV	IFEA	AFMY	VFYV	MYDG	FSMQ	RLVK	hCX26
137	TYTSS	LFRL	LLFE	AGFM	YALY	YVYD	GFMAR	LVK	zCx30.3
169	CNAWP	CPNT	VD	CFV	SR	PTEK	TVFT	VFMI	hCX26
171	CEQWP	CPNK	VD	CFI	SR	PTEK	TVFT	IFMV	zCx30.3
203	ILLNV	TELC	YLLI	RYCS	GKSK	KPV			hCX26
205	IVLN	VAEL	AYLI	VKAL	LRCS	SARAK	GRRS	FSVH	zCx30.3
227									hCX26
239	MST	KAHL	QNEK	NARLL	SSAS	DSSS	NKTV		zCx30.3

Figure 1. The alignments of amino acid sequences between human CX26 and zebrafish Cx30.3. The gray shading highlights identical residues of the two sequences. The hashtag indicates human p.R184 or zebrafish p.R186, while the asterisks mark p.D46, p.E47, and p.Y65 with bonding connection to p.R184/p.R186 of adjacent or the same connexin. The positions of p.D46, p.E47, and p.Y65 are identical in human and zebrafish.

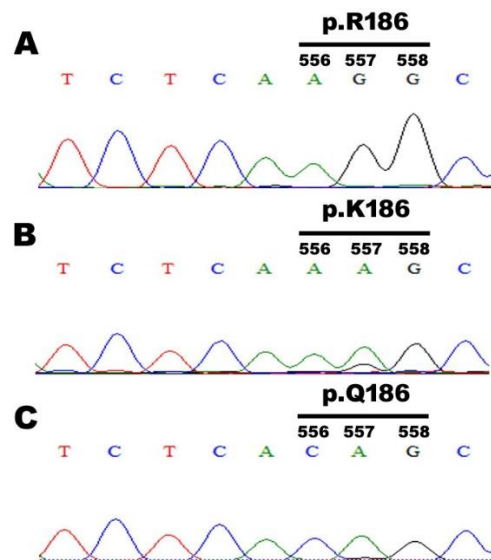


Figure 2. Confirmation of the genomic DNA sequences in (A) Tg(agr2:cx30.3-EGFP WT), (B) Tg(agr2:cx30.3-EGFP R186K) with 557G>A, and (C) Tg(agr2:cx30.3-EGFP R186Q) with 556A>C and 557G>A. The genomic DNA was obtained from the tissues of caudal fins. Polymerase chain reaction was conducted to amplify cx30.3 genes for DNA sequencing.

Table S1. Amino acid sequences of Cx30.3 variants.

Cx30.3 Variants	Amino Acid Sequences
Cx30.3 p.R186	MSWGALYAQLGGVNHSTSLGKIWLSVLFIFRICILVIAAETVWGDEQSDFTCNTQ QPGCKNVCYDHFFPVSHIRFWCLQLIFVSTPALLVAMHVAYRKRNMKKKSILAKR GGNGKGDDLES�KNRRLPITGPLWWTYTSSLFFRLLFEAGFMYALYYVYDGFQMA RLVKCEQWPCPNKVDCFIS ^R PTTEKTVFTIFMVGSSAICIVLNVAELAYLIVKALLRCS ARAKGRRSFVHQEKMSTEK AHLQNEKNARLLSSASDSSSNKTV
Cx30.3 p.Q186	MSWGALYAQLGGVNHSTSLGKIWLSVLFIFRICILVIAAETVWGDEQSDFTCNTQ QPGCKNVCYDHFFPVSHIRFWCLQLIFVSTPALLVAMHVAYRKRNMKKKSILAKR GGNGKGDDLES�KNRRLPITGPLWWTYTSSLFFRLLFEAGFMYALYYVYDGFQMA RLVKCEQWPCPNKVDCFIS ^Q PTTEKTVFTIFMVGSSAICIVLNVAELAYLIVKALLRCS ARAKGRRSFVHQEKMSTEK AHLQNEKNARLLSSASDSSSNKTV
Cx30.3 p.K186	MSWGALYAQLGGVNHSTSLGKIWLSVLFIFRICILVIAAETVWGDEQSDFTCNTQ QPGCKNVCYDHFFPVSHIRFWCLQLIFVSTPALLVAMHVAYRKRNMKKKSILAKR GGNGKGDDLES�KNRRLPITGPLWWTYTSSLFFRLLFEAGFMYALYYVYDGFQMA RLVKCEQWPCPNKVDCFIS ^K PTTEKTVFTIFMVGSSAICIVLNVAELAYLIVKALLRCS ARAKGRRSFVHQEKMSTEK AHLQNEKNARLLSSASDSSSNKTV