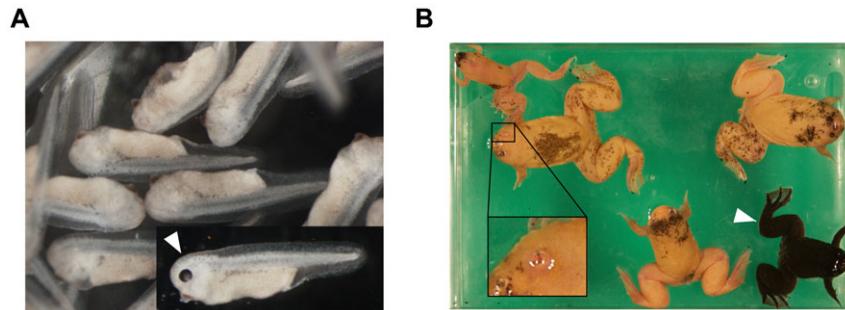
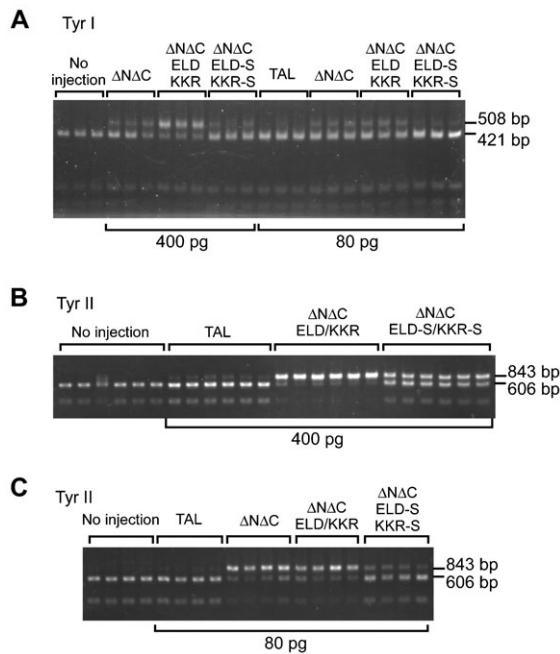


**Supplementary Material**

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**Fig. S1. Photographs of tadpoles and frogs that were raised from TALEN-mRNA-injected embryos.** Embryos injected with  $\Delta\text{N}\Delta\text{C}$ -ELD/KKR-Tyr I mRNAs were reared to albino tadpoles (A) and frogs (B). The white arrowheads indicate a wild-type tadpole (A) and a wild-type frog (B) that were bred from uninjected embryos. The inset shows the higher magnification of a right eye of an albino frog (B).



**Fig. S2. Gel electrophoresis images of genomic PCR products from TALEN-mRNA-injected embryos after restriction enzyme digestion.**

Embryos were injected with 400 pg or 80 pg of TALEN-Tyr I mRNAs (A) and 400 pg (B) or 80 pg (C) of TALEN-Tyr II mRNAs. Genomic DNA from each embryo was prepared and subjected to PCR using a specific primer set to amplify a DNA fragment containing the target sites. The PCR products were digested with HaeIII (A) or PflMI (B,C). The injected TALEN scaffolds and doses of mRNA are shown at the top and bottom of the gel images, respectively. These images show the result from a portion of the embryos analyzed in Fig. 4.

A	Tyr I Left	HaeIII GGCC	Tyr I Right	
	CTGTTCTTCTCCATGTTGCAGG	GGCC	AGTTCCCAAGGGCATGTAGCACCG	WT x 3
	CTGTTCTCTTCATGTTGCA-	GGCC	AGTTCCCAAGGGCATGTAGCACCG	Δ1 x 2
	CTGTTCTCTCCATGTTGCA -	GGCC	AGTTCCCAAGGGCATGTAGCACCG	Δ2 x 3
	CTGTTCTCTTCATGTTG-----		CAGTTCCCAAGGGCATGTAGCACCG	Δ6 x 1
	CTGTTCTCTTCATGTTG-----		CAGTTCCCAAGGGCATGTAGCACCG	Δ7 x 4
	CTGTTCTCTTCATGTTGAG-----		GGGCATGTAGCACCG	Δ14 x 1
			CCAAGGGCATGTAGCACCG	Δ107 x 1

B	PfMI			
	Tyr II Left	CCANNNNTGG	Tyr II Right	
	ACTGGCCCTCAGTTT	CCATTCACTGG	GTTGACGA TAGAGAGAACTGGCCAAC	WT
	ACTGGCCCTCAGTTTCAT	CTCT	-TGACGATAGAGAGAACTGGCCAAC	Δ5 x 1
	ACTGGCCCTCAGTTT	CCATTCTCTGG	-ACGATAGAGAGAACTGGCCAAC	Δ5 x 1
	ACTGGCCCTCAGTTT	CCATTCTCTGG	-CGATAGAGAGAACTGGCCAAC	Δ6 x 1
	ACTGGCCCTCAGTTT	CCATTCTCTGG	-ACGATAGAGAGAACTGGCCAAC	Δ6 x 3
	ACTGGCCCTCAGTTTCATT		-GACGATAGAGAGAACTGGCCAAC	Δ10 x 1
	ACTGGCCCTCAGTTTCAT		-GACGATAGAGAGAACTGGCCAAC	Δ11 x 1
	ACTGGCCCTCAGTTT	CCATTCTCTGGG	-GAGAACTGGCCAAC	Δ12 x 1
	ACTGGCCCTCAGTTTCA		-CGATAGAGAGAACTGGCCAAC	Δ14 x 1
	ACTGGCCCTCAGTTTCATT		-ACGATAGAGAGAACTGGCCAAC	Δ96 x 1
	ACTGGCCCTCAGTTTCATT		-TGACGATAGAGAGAACTGGCCAAC	Δ407 x 1
	ACTGGCCCTCAGTTTCATT		-ATAGAGAGAACTGGCCAAC	Δ7+1 x 1
	ACTGGCCCTCAGTTTCAG		-TAGAGAGAACTGGCCAAC	Δ8+2 x 1
			-TAGAGAGAACTGGCCAAC	Δ19+2 x 1

**Fig. S3. Mutated target sequences in TALEN-mRNA-injected embryos.** Target DNA sequences were determined using genomic DNA purified from an NF-stage 35/36 embryo that had been injected with 400 pg of ΔNΔC-ELD/KKR-Tyr I mRNAs (A) or -Tyr II mRNAs (B). The wild-type sequence is shown at the top. The black bars indicate the Tyr I (A) and Tyr II (B) target sites. Gaps resulting from deletion are denoted as dashes. Inserted nucleotides are indicated as red characters. The HaeIII (A) and PfMI (B) recognition sequences are indicated as blue characters. The mutation types and frequencies are indicated on the right.