

### Figure S3. DNA sequences of plasmid constructs used in this study

Plasmid stock 1300, ACA9promoter::intron-GFP-CNGC7 (genomic DNA), abbreviated as psl300, 9p-i-GFP-CNGC7. The ACA9 promoter with an added intron in the 5' UTR, extends from an SbfI site to SalI, followed by a sequence encoding GFP (green italics). A linker connects GFP to the coding sequence for CNGC7, which starts with the first ATG following an AscI site, in the context of **GGCGCGCCCGGCGGAATG**, and ends with a TGA upstream of a NotI site, in the context of GATTTTGATGCTGAA**TGA**.

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by a sequence encoding FLAG epitope tag (green italics). A linker connects the Flag tag to the coding sequence for *CNGC7* with an F589 to W substitution, which starts with the first ATG following an AscI site, in the context of **GGCGCGCCGGCGGAATC**, and ends with a TGA upstream of a NotI site, in the context of GATTTTATGATGCTGAATGA. The F to W substitution with a silent *NheI* diagnostic site is in the context of GCTAGCCAG**TGG**

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ATCCCCATCAACAGCCCGCGCTGAGCGGGCT

Plasmid stock 1685, CNGC18promoter::intron-Flag-CNGC8(F624W) (cDNA), abbreviated as ps1685, 18p-i-Flag-CNGC8(F624W). The CNGC18 promoter with an added intron in the 5' UTR, extends from an SbfI site to the first SalI site, followed by a sequence encoding Flag epitope tag (green italics). A linker connects the Flag tag to the

coding sequence for *CNGC8* with an F624 to W substitution, which starts with the first ATG following an AscI site, in the context of **GGC**CGCGCC**CGGCGGAATG**, and ends with a TGA upstream of a NotI site, in the context of ACAGATGACTTGA**ACTGA**. The F to W substitution with a silent NheI diagnostic site is in the context of GCTAGCCAG**TGG**.

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Plasmid stock 1687, CNGC18promoter::intron-Flag-CNGC8 (cDNA), abbreviated as ps1687, 18p-i-Flag-CNGC8. The *CNGC18* promoter with an added intron in the 5' UTR, extends from an SbfI site to the first SalI site, followed by a sequence encoding Flag epitope tag (green italics). A linker connects the Flag tag to the coding sequence for *CNGC8*, which starts with the first ATG following an AscI site, in the

context of **GGCGCGCC**CGGCGGAATG, and ends with a TGA upstream of a NotI site, in the context of ACAGATGACTTGAAC**TGA**.

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Plasmid stock 1692, CNGC18promoter::intron-Flag-CNGC7 (genomic DNA), abbreviated as ps1692, 18p-i-Flag-CNGC7. The CNGC18 promoter with an added intron in the 5' UTR, extends from an SbfI site to the first SalI site, followed by a sequence encoding Flag epitope tag (green italics). A linker connects the Flag tag to the coding sequence for CNGC7, which starts with the first ATG following an AscI site, in the context of **GGCGGCC**CGGCGGA**ATG**, and ends with a TGA upstream of a NotI site, in the context of GATTTTGTGCTGA**TGA**.



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ATCCCATCCAACAGCCCGCGCTGAGCGGGCT