

## Supplementary information, Table S4. Efficiencies of TALENs-mediated indels with novel RVDs.

Targeted Gene	Type of TALENs	TALEN <sup>L</sup>	TALEN <sup>R</sup>	Mean Indels (%) ± s.d. (n = 3)
LRP1 <sup>a</sup>	TALEN <sup>S<sub>NN</sub></sup>	NI NI <b>NN</b> NI HD NG NG <b>NN</b> HD NI <b>NN</b> HD HD HD HD	NI HD NI <b>NN</b> <b>NN</b> NG NG NI NG NG NG <b>NN</b> NI NG HD	77.1 ± 4.3
	TALEN <sup>S<sub>NH</sub></sup>	NI NI <b>NH</b> NI HD NG NG <b>NH</b> HD NI <b>NH</b> HD HD HD HD	NI HD NI <b>NH</b> <b>NH</b> NG NG NI NG NG NG <b>NH</b> NI NG HD	50.7 ± 4.9
	TALEN <sup>S<sub>KN</sub></sup>	NI NI <b>KN</b> NI HD NG NG <b>KN</b> HD NI <b>KN</b> HD HD HD HD	NI HD NI <b>KN</b> <b>KN</b> NG NG NI NG NG NG <b>KN</b> NI NG HD	78.1 ± 3.4
DKK1 <sup>b</sup>	TALEN <sup>S<sub>NN</sub></sup>	NG HD HD NI NI HD <b>NN</b> HD NG NI NG HD NI NI <b>NN</b>	<b>NN</b> HD HD HD HD <b>NN</b> HD NI <b>NN</b> HD <b>NN</b> HD HD <b>NN</b> HD	54.7 ± 4.8
	TALEN <sup>S<sub>NH</sub></sup>	NG HD HD NI NI HD <b>NH</b> HD NG NI NG HD NI NI <b>NH</b>	<b>NH</b> HD HD HD HD <b>NH</b> HD NI <b>NH</b> HD <b>NH</b> HD HD <b>NH</b> HD	39.4 ± 7.8
	TALEN <sup>S<sub>KN</sub></sup>	NG HD HD NI NI HD <b>KN</b> HD NG NI NG HD NI NI <b>KN</b>	<b>KN</b> HD HD HD HD <b>KN</b> HD NI <b>KN</b> HD <b>KN</b> HD HD <b>KN</b> HD	49.9 ± 2.7
LRP1 <sup>a</sup>	TALEN <sup>S<sub>NG</sub></sup>	NI NI NN NI HD <b>NG</b> <b>NG</b> NN HD NI NN HD HD HD HD	NI HD NI NN NN <b>NG</b> <b>NG</b> NI <b>NG</b> <b>NG</b> <b>NG</b> NN NI <b>NG</b> HD	77.1 ± 4.3
	TALEN <sup>S<sub>RG</sub></sup>	NI NI NN NI HD <b>RG</b> <b>RG</b> NN HD NI NN HD HD HD HD	NI HD NI NN NN <b>RG</b> <b>RG</b> NI <b>RG</b> <b>RG</b> <b>RG</b> NN NI <b>RG</b> HD	40.2 ± 10.3
ATG5 <sup>c</sup>	TALEN <sup>S<sub>NG</sub></sup>	<b>NN</b> <b>NG</b> <b>NG</b> <b>NG</b> HD NI HD NN HD <b>NG</b> NI <b>NG</b> NI <b>NG</b> HD	NI <b>NG</b> NN NN <b>NG</b> <b>NG</b> HD <b>NG</b> NN HD <b>NG</b> <b>NG</b> HD HD HD	11.5 ± 0.6
	TALEN <sup>S<sub>RG</sub></sup>	<b>NN</b> <b>RG</b> <b>RG</b> <b>RG</b> HD NI HD NN HD <b>RG</b> NI <b>RG</b> NI <b>RG</b> HD	NI <b>RG</b> NN NN <b>RG</b> <b>RG</b> HD <b>RG</b> NN HD <b>RG</b> <b>RG</b> HD HD HD	6.5 ± 0.5

<sup>a</sup> Sequence for TALENs targeting is 5'-TAAGACTTGCAGCCCCAAGCAGTTTGCCTGCAGAGATCAAATAACCTGTA-3', and TALEN<sup>L</sup> and TALEN<sup>R</sup> targeted regions are labeled in grey shades. Sequences of primers used to amplify the TALENs targeting region for the assessment of indels are: 5'-AGCCTAGAGGACTTGGAGGG-3' and 5'-ACCTGGGCAATCATCAAG-3'.

<sup>b</sup> Sequence for TALENs targeting is 5'-TTCCAACGCTATCAAGAACCTGCCCCACCGCTGGGCGGCGCTGCGGGGCA-3', and TALEN<sup>L</sup> and TALEN<sup>R</sup> targeted regions are labeled in grey shades. Sequences of primers used to amplify the TALENs targeting region for the assessment of indels are: 5'-GACCCAGGCTTGCAAAGTGA-3' and 5'-CAGGCGAGACAGATTTGCAC-3'.

<sup>c</sup> Sequence for TALENs targeting is 5'-TGTTTCACGCTATATCAGGATGAGATAACTGAAAGGGAAGCAGAACCATA-3', and TALEN<sup>L</sup> and TALEN<sup>R</sup> targeted regions are labeled in grey shades. Sequences of primers used to amplify the TALENs targeting region for the assessment of indels are: 5'-TAGCAGGTTTCATTCATCGTTGCAAGGA-3' and 5'-ATGTAAGGAAAACAAAGTCCAGAACGC-3'.