

**Supplementary information, Table S3.** Base binding specificity of previously reported RVDs obtained from TALE-(XX')<sub>3</sub> library screening.

Category	RVDs	A	T	C	G
NX'	NA	-	++	+	+
	NC	+	-	+	-
	ND	-	-	+	-
	NG	-	+	-	-
	NH	-	-	-	++++
	NI	++	-	-	-
	NK	-	-	-	+
	NN	++	-	-	++++
	NP	-	-	-	-
	NQ	-	-	+	-
	NS	++++	-	+	++++
	NT	++++	-	+	++++
	NV	++	-	+	+
HX'	HA	-	+	+	-
	HD	-	-	++++	-
	HG	-	-	-	-
	HH	-	-	-	++++
	HI	-	-	-	-
	HN	++	-	-	++++
IX'	IG	-	-	-	-
	IS	-	-	-	-
SX'	SH	-	-	-	-
	SN	-	+	-	+
	SS	+	+	-	+
YX'	YG	-	-	-	-

Note:

The ranges of fold induction of EGFP reporter for RVDs in TALE-(XX')<sub>3</sub> are indicated as follows:

- < 6  
 + 6 - 12  
 ++ 12 - 18  
 +++ 18 - 24  
 ++++ ≥ 24