

Parental cell line	gRNA	Cell line label	ADAR1 western blot results	DNA sequencing results
HEK 293T	ADAR1 g1	ADAR1 KO	ADAR1p110 <sup>-</sup> ADAR1p150 <sup>-</sup>	Exon 2: 370 bp deletion
HEK 293T	ADAR1 g2	ADAR1 KO	ADAR1p110 <sup>-</sup> ADAR1p150 <sup>-</sup>	Exon 2: 1 bp deletion or 172 bp deletion
HEK 293T	ADAR1 g2	ADAR1 KO	ADAR1p110 <sup>-</sup> ADAR1p150 <sup>-</sup>	Exon 2: 320 bp deletion
HEK 293T	ADAR1p150 g1, g2	ADAR1p150 KO	ADAR1p110 <sup>+</sup> ADAR1p150 <sup>-</sup>	Pi and exon 1A deleted
HEK 293T	ADAR1p150 g1, g2	ADAR1p150 KO	ADAR1p110 <sup>+</sup> ADAR1p150 <sup>-</sup>	Pi and exon 1A deleted
HEK 293T	ADAR1p150 g1, g2	ADAR1p150 KO	ADAR1p110 <sup>+</sup> ADAR1p150 <sup>-</sup>	Not available
HEK 293T	ADAR1p110 g1, g2	ADAR1p110_Δ	ADAR1p110 <sup>+</sup> ADAR1p150 <sup>+</sup>	Pc and exon 1B deleted
HEK 293T	ADAR1p110 g1, g3	ADAR1p110_Δ	ADAR1p110 <sup>+</sup> ADAR1p150 <sup>+</sup>	Pc and exon 1B deleted
HEK 293T	ADAR2 g1	ADAR2 KO	ADAR2 <sup>-</sup>	Exon 4: 10 bp deletion or 14 bp deletion
HEK 293T	ADAR2 g2	ADAR2 KO	ADAR2 <sup>-</sup>	Exon 4: 212 bp deletion or 2 bp deletion
HUES8-iCas9	ADAR1 g2	ADAR1 KO	ADAR1p110 <sup>-</sup> ADAR1p150 <sup>-</sup>	Exon 2: 1 bp insertion
HUES8-iCas9	ADAR1 g2	ADAR1 KO	ADAR1p110 <sup>-</sup> ADAR1p150 <sup>-</sup>	Exon 2: 1 bp insertion or 23 bp deletion

**Table S2: Summary of ADAR1-deficient cell lines generated in this study, Related to Figure 1, 6, and S1**

For guide RNA (gRNA) sequence refer to Table S1. ADAR1p110\_Δ indicates cell clones that maintain ADAR1p110 expression at a reduced level. '+' indicates a positive band and '-' indicates a negative band by western blot. Pc , constitutively active promoter; Pi, interferon inducible promoter (See Figure 1A).