

**Supplementary Table S1.** Sequences of all 7 sgRNAs

sgRNA	Sequence (5'–3')
MTHFR-sgRNA1	GUCUAGAGGACAGAAUUUUUCAACGGGUGUGCCAAUGGCCACUUCCAGGUGGCAAAGCCCGUUGA GCUUCUCAAUCUGAGAAGUGGCAC <b>GCGGGAGCCGAUUUCAU</b>
MTHFR-sgRNA2	GUCUAGAGGACAGAAUUUUUCAACGGGUGUGCCAAUGGCCACUUCCAGGUGGCAAAGCCCGUUGA GCUUCUCAAUCUGAGAAGUGGCAC <b>CUGCGGGAGCCGAUUUCAUC</b>
MTHFR-sgRNA3	GUCUAGAGGACAGAAUUUUUCAACGGGUGUGCCAAUGGCCACUUCCAGGUGGCAAAGCCCGUUGA GCUUCUCAAUCUGAGAAGUGGCAC <b>GUCUGCGGGAGCCGAUUUCA</b>
MTHFR-sgRNA4	GUCUAGAGGACAGAAUUUUUCAACGGGUGUGCCAAUGGCCACUUCCAGGUGGCAAAGCCCGUUGA GCUUCUCAAUCUGAGAAGUGGCAC <b>GGAGCCGAUUUCAUCAUCAC</b>
MTHFR-sgRNA5	GUCUAGAGGACAGAAUUUUUCAACGGGUGUGCCAAUGGCCACUUCCAGGUGGCAAAGCCCGUUGA GCUUCUCAAUCUGAGAAGUGGCAC <b>UCUGCGGGAGCCGAUUUCAU</b>
MTHFR-sgRNA6	GUCUAGAGGACAGAAUUUUUCAACGGGUGUGCCAAUGGCCACUUCCAGGUGGCAAAGCCCGUUGA GCUUCUCAAUCUGAGAAGUGGCAC <b>GUGUCUGCGGGAGCCGAUUU</b>
MTHFR-sgRNA7	GUCUAGAGGACAGAAUUUUUCAACGGGUGUGCCAAUGGCCACUUCCAGGUGGCAAAGCCCGUUGA GCUUCUCAAUCUGAGAAGUGGCAC <b>AGCCGAUUUCAUCAUCACGC</b>