

| Species | System | PMID where applicable | Additional information about the system | Total number of sites targeted | Optimal restriction enzyme combination | Optimal theoretical size range (in bp) | % max Score | NF/1000 | Enrichment Value (EV) | Cost Reduction Factor (CRF) | Robustness (R) |
|-----------------------------|--------------------------|-----------------------|--|--------------------------------|--|--|-------------|---------|-----------------------|-----------------------------|----------------|
| <i>Homo sapiens</i> | Exon-intron boundaries | | DNA methylation has been shown to affect alternative splicing. Therefore, we focused on targeting CpGs close to canonical splicing sites. | 26211 | (BsiSI OR MspI) AND (SbfI OR SdaI OR Sse8387I) | 80_500 | 25.4 | 772.23 | 2.06446811 | 53.32 | 0.94704403 |
| <i>Homo sapiens</i> | Horvath epigenetic clock | 24138928 | The Horvath epigenetic clock is the best predictor of biological age available in humans. We have attempted to target the 353 CpG sites that are used in the model in order to reduce the cost associated with the assay. | 353 | (BsiSI OR MspI) AND (BspQI OR LglI OR SapI) | 60_160 | 27.57 | 442.456 | 3.65771916 | 93.06 | 0.91305072 |
| <i>Homo sapiens</i> | Imprinted loci | 26769960 | Genomic imprinting is an epigenetic phenomenon that results in gene expression occurring in a parent-of-origin fashion. We have attempted to target Cs in CpG context that are found within the canonical human imprints. | 2810 | (BmeT110I OR BsoBI) AND (BsaWI) | 60_540 | 25.12 | 336.88 | 2.67867053 | 122.23 | 0.98085689 |
| <i>Homo sapiens</i> | Placental imprinted loci | 26769960 | Genomic imprinting is an epigenetic phenomenon that results in gene expression occurring in a parent-of-origin fashion. However, until recently many extraembryonic imprints were still unknown. We have targeted Cs in CpG context that are found within these novel human placental imprints. | 7591 | (BsaWI) AND (BssAI) | 60_540 | 26.41 | 107.248 | 1.72827483 | 383.94 | 0.93382453 |
| <i>Homo sapiens</i> | CTCF sites | 26257180 | CTCF is an important architectural protein that helps to organise chromatin domains. Since its binding has been shown to be dependent on DNA methylation in some of its recognition sequences, we have targeted the CpG sites within these regions of the genome. | 2000 | (BmeT110I OR BsoBI) AND (BssAI) | 40_360 | 25.5 | 314.079 | 2.78946872 | 131.1 | 0.88798165 |
| <i>Mus musculus</i> | iPSCs demethylated | 28147265 | iPSC reprogramming in mouse is characterised by global changes in DNA methylation. Sites that tend to undergo demethylation faster than the genome average tend to be within ESC-Super Enhancers. We targeted the Cs in CpG context in these regions, as they are interesting for the reprogramming field. | 1449 | (BmeT110I OR BsoBI) AND (BsiSI OR MspI) | 80_980 | 25.19 | 974.05 | 3.42628839 | 37.31 | 0.96792238 |
| <i>Mus musculus</i> | iPSCs maintained | 28147265 | iPSC reprogramming in mouse is characterised by global changes in DNA methylation. Sites that tend to be resistant to the genome-wide demethylation tend to be within Intercisternal A-particle containing regions. We targeted the Cs in CpG context in these regions, as they are interesting for the reprogramming field. | 3896 | (BmeT110I OR BsoBI) AND (BsiSI OR MspI) | 80_560 | 25.85 | 690.088 | 2.835875 | 52.66 | 0.94227711 |
| <i>Mus musculus</i> | NRF1 sites | 26675734 | NRF1 is a transcription factor whose binding to the DNA is dependent on the methylation status of its recognition sequences. We have tried to enrich for those CpG sites that overlap with <i>in vivo</i> NRF1 binding sites. | 17018 | (BmeT110I OR BsoBI) AND (PaeI OR SphI) | 20_760 | 25.04 | 445.36 | 2.01909776 | 81.6 | 0.99634045 |
| <i>Arabidopsis thaliana</i> | CHG sites | 27419873 | Non-CpG methylation is an important epigenetic modification in plants. In this study a huge number of regions containing non-CpG methylation were found to vary between different Arabidopsis accessions in the 1001 Epigenomes Project. We targeted Cs in non-CpG context within these non-CpG DMRs. | 21801 | (AanI OR PstII) AND (Csp6I OR CviQI) | 100_520 | 25.05 | 165.313 | 1.48095531 | 9.65 | 0.94999336 |