



**Supplemental Figure S2:** Additional schematics of the dCas9 (dC9) and TALE (T) constructs used, indicating positioning of the nuclear localization sequences (NLS), protein tags (human influenza hemagglutinin - 3xHA, 3xTy1), promoter choice (glycerol kinase promoter - hPGK, human elongation factor-1 alpha promoter - hPEF1a), solubility tag (protein G B1 domain - GB1), selectable marker (puromycin resistance - puro), single-chain Fv antibody against GCN4 domain ( $\alpha$ GCN4), human DNTM3A catalytic domain (D3A), human DNTM3A catalytic mutant domain (D3AMut), red fluorescent protein (mCherry) and human Tet Methylcytosine Dioxygenase 1 (TET1). dC9Sun-TET1 was constructed by Morita *et al.*