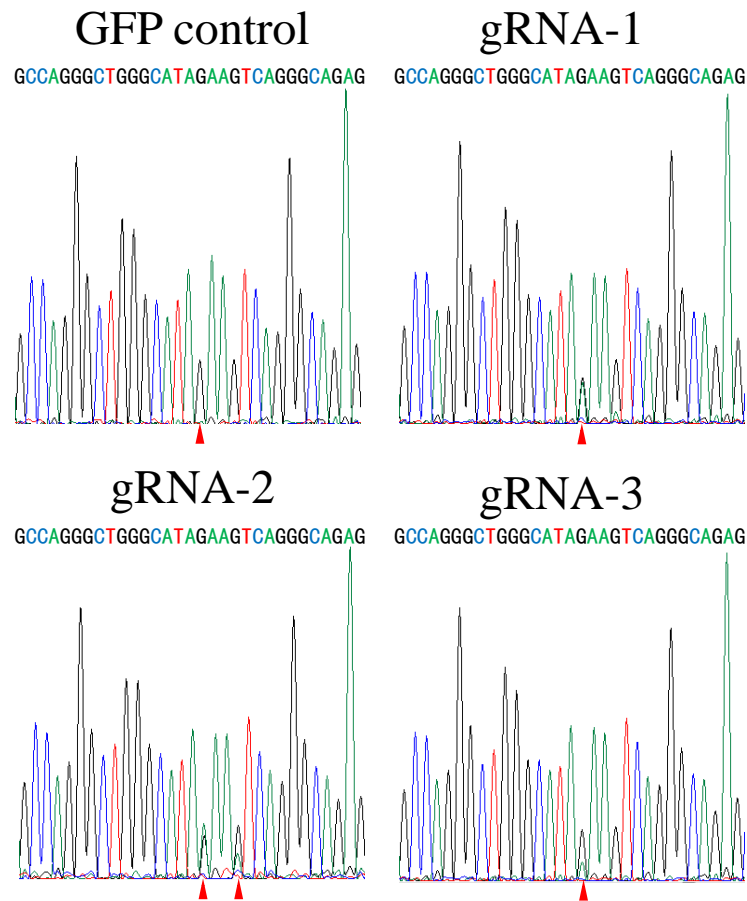


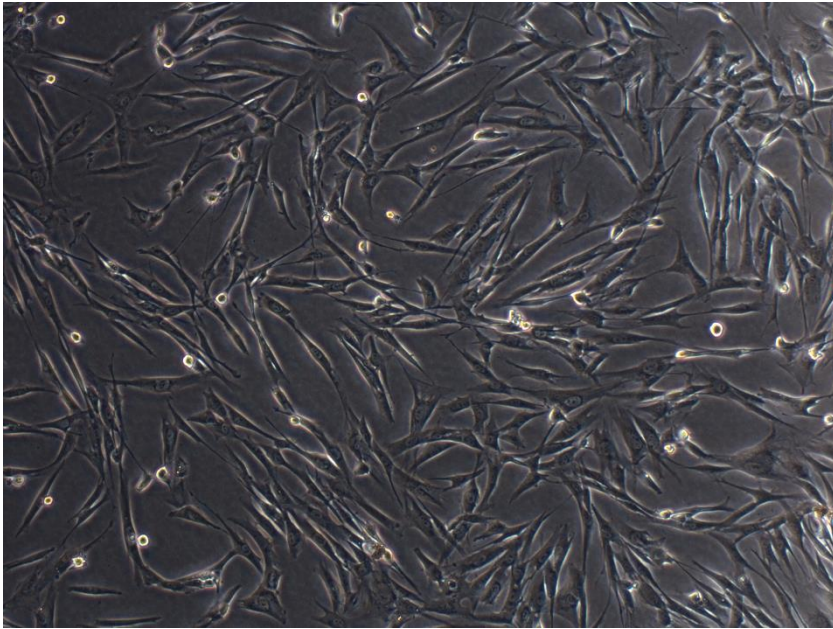
gRNA-1: GACTTCTATGCCCAGCCCTGG  
gRNA-2: ACTTCTATGCCCAGCCCTGG  
gRNA-3: CTTCTATGCCCAGCCCTGG

**Figure S1. Target sequence of gRNAs targeting *HBB* -28(A>G) mutation.**  
The target C intended to be demethylated is in red. PAM in green.

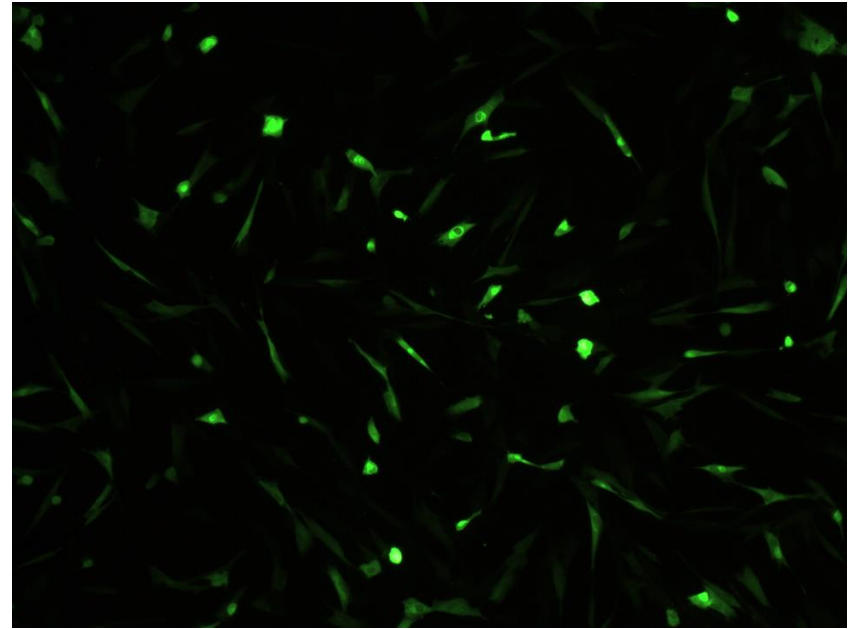


**Figure S2. Precise repairing of *HBB* -28 (A>G) mutation by base editor in stable cell line detected by Sanger sequencing.**

Target sites from *HBB* -28(A>G) mutant stable 293T cell lines were PCR amplified and sanger sequenced. -28(A>G) mutation and deaminated sites were labelled with red arrowhead. GFP control, *HBB* -28(A>G) mutant stable 293T cells transfected with GFP expression vector.



Bright Field



GFP

**Figure S3. Transfecting the homozygous *HBB* -28 (A>G) mutant skin fibroblast by nucleofection.**



**Figure S4. Injecting the cloned human embryos with gRNA-1 and BE3.**

