

**Figure S20**: (a) Map of shRNA constructs. Information of the vector construct of shRNA plasmids targeted for human DICER. Graphical illustration depicting the vector map positions of shRNA including selection markers and promoters. (Image source: Genecopia) (b) and (c) Validation of transformation and plasmid size using agarose gel and restriction digestion. Restriction digested plasmid isolated from transformants. Circular shRNA plasmid vectors (Size 6675kb) was digested with XhoI (NEB) at 6358 site and EcoRI (NEB) at 1, resulting large fragment and fallout has been shown (B for DICER shRNA plasmid constructs and C for AAR2 shRNA Plasmid constructs). It confirmed the positive transformation. (d) and (e) Confirmation of the cDNA. End-point PCR product of cDNA using U6 primer in all the transfected group, confirming the amplified product form cDNA template. Since, the adaptor segment (46 bp) is attached with the miRNA sequence total size of the PCR product comprising the miRNA and adapter sequence typically ranges between 50 and 100 bp.