

## Supplementary Material

**Suppl 1.** The validated DDIAS-Mut that contains several mismatches but synonymous mutations reverse the effects caused by shDDIAS-2. (a) Schematic diagram of the shDDIAS-2-resistant cDNA mutagenesis. The 18 bp DNA sequence and corresponding amino acids of the shDDIAS-2 targeting region were shown with synonymous mutations. (b) The protein levels of DDIAS in U87-MG and U251 cells after cotransfection with shDDIAS-2 and DDIAS-Mut were measured using western blotting. (c and d) CCK-8 and EdU assays were used to determine the cell viability and proliferation rates of U87-MG and U251 cells after cotransfection with shDDIAS-2 and DDIAS-Mut. Scale bars, 50  $\mu$ m. (e) The invasion and migration capacities of U87-MG and U251 cells cotransfected with shDDIAS-2 and DDIAS-Mut were determined by Transwell assay. Scale bars, 50  $\mu$ m. \*\* $P < 0.01$  as compared to the shNC + pcDNA3.1 group or the shDDIAS-2 + pcDNA3.1 group.

