



**Figure S7. Insertion of A Hairpin Structure at the 5' UTR, but Not at the 3' UTR, Inhibited Nuclear Retention of the PTC+  $\beta$ -globin mRNA, related to Figure 6. (a)**

Schematic of Smad constructs is shown. The gray and black boxes indicate the Myc and HA tag respectively. The positions of start codon and the hairpin structure are

marked. Equal amount of Smad constructs were microinjected into the nuclei of HeLa cells, and  $\alpha$ -amanitin was added 30 mins after microinjection. 0.5 hr or 1 hr after addition of  $\alpha$ -amanitin, FISH was carried out to detect the mRNA. Insets show the injection marker. The graph shows the average N/C ratios for WT and 133T Smad mRNAs at each time point, and error bars indicate the standard errors among three independent experiments. Statistical analysis was performed as in Figure 1C. (b) Schematic of  $\beta$ -globin constructs is shown. The gray and black boxes indicate the Myc and HA tag respectively. The positions of start codon and the hairpin structure are marked. - hp, 5' hp and 3' hp  $\beta$ -globin constructs were microinjected into the nuclei of HeLa cells, and  $\alpha$ -amanitin was added 30 mins after microinjection. 1 hr after addition of  $\alpha$ -amanitin, FISH was carried out to detect the mRNA. Insets show the injection marker. (c) Equal amounts of  $\beta$ -globin DNA constructs were transfected into HeLa cells, and 12 hr after transfection, FISH was carried out.