Silencing of the p53R2 gene by RNA interference inhibits growth and enhances 5-fluorouracil sensitivity of oral cancer cells

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Fig. 1. (A) Representative reverse transcription-PCR (RT-PCR) analysis for p53R2 in untreated MCF7, SAS, HSC-4 and Ca9-22 cells. The p53R2/GAPDH intensities are means±SD of triplicate experiments. (B) Growth inhibition by 5-fluorouracil (5-FU) in MCF7, SAS, HSC-4 and Ca9-22 cells. The cells were plated on 96-well plates and treated with 0, 0.5, 1, 5, and 10 µM 5-FU for 72 h. Cell viability was determined using a 3-(4, 5-dimethylthiazol-2-yl)-2, 5-diphenyltetrazolium bromide (MTT) assay. The data are presented as the means of three separate experiments, each performed in triplicate; bars, SD.
Fig. 2. Representative reverse transcription-PCR (RT-PCR) analysis for transcriptional induction of p53R2, p53 and p21 in NHDF (A), SAS (B), HSC-4 (C), Ca9-22 (D), and MCF7 (E) after 5-FU treatment. Cells were treated with 0.5 µM 5-FU and expression levels of p53R2, p53 and p21 were analyzed at 0, 2, 6, 12, 24, and 48 h after treatment. Band intensities were shown as the bar graphs.
Fig. 3. Representative reverse transcription-PCR (RT-PCR) analysis for p53R2 72 h following treatment with Oligofectamine reagent alone (Oligo.), luciferase control siRNA (Luc), or p53R2 siRNA (p53R2 RNAi) in SAS, HSC-4 and NHDF cells. Band intensities were shown as the bar graphs.
Fig. 4. Representative reverse transcription-PCR (RT-PCR) and Western blot analyses for the suppression of p53R2 in SAS (A), HSC-4 (B) and NHDF (C) cells. Cells were transfected with luciferase control siRNA (Luc) or p53R2 siRNA (p53R2), and after 24 h treated with vehicle (−) or 5-fluorouracil (+) for 48 h. Western blot analysis shows p53R2 expression in the components (cytosolic and nuclear) of the cells. Band intensities obtained from RT-PCR were shown as the bar graphs.
Fig. 5. Effect of p53R2 siRNA on cell growth. SAS (A), HSC-4 (B), and NHDF (C) cells were transfected with luciferase control siRNA or p53R2 siRNA, and after 24 h treated with vehicle (5-FU −) or 5-fluorouracil (5-FU +) for 48 h. Cell viability (%) is shown as a percentage of the untreated control cells in the absence of 5-FU. Columns are presented as the means of three separate experiments, each performed in triplicate; bars, SD.