Supplementary

Table S1 Statistics of RASA2 expression

Group	Median	Interquartile range	Lower quartile	Upper quartile	Mean	SD	SE
Normal	2.260	0.377	2.048	2.425	2.264	0.343	0.033
Tumor	2.356	0.673	2.042	2.715	2.400	0.559	0.017

RASA2, Ras p21 protein activator; SD, standard deviation; SE, standard error.

Table S2 Patient characteristics

Characteristics	Total (n=205)
Age (years), median [range]	62.3 [27–86]
Sex, n	
Male	132
Female	73
Stage, n	
IIIa	123
IVa	82
Tumor location, n	
Left lung	90
Right lung	115
RECIST, n	
CR	44
PR	102
SD	37
PD	22

RECIST, Response Evaluation Criteria in Solid Tumors; CR, complete response; PR, partial response; SD, stable disease; PD, progressive disease.

https://dx.doi.org/10.21037/tlcr-24-160

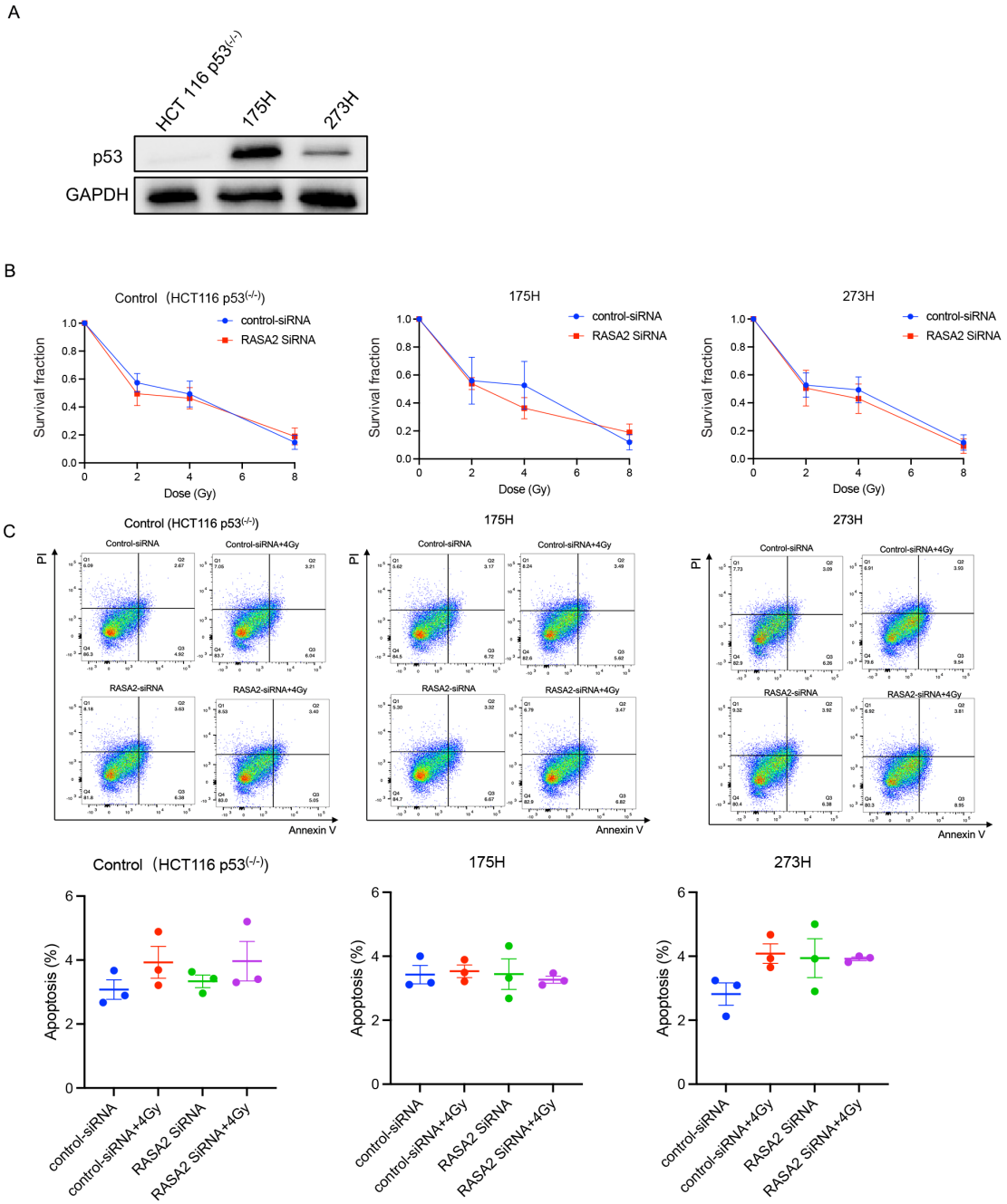

Figure S1 RASA2 had no effect on radiosensitivity in lung cancer cells with GOF-mutant p53. (A) p53 expression on p53 null [HCT116 ($p53^{-/-}$)] or GOF-mutant p53 (175H and 273H) cell lines. (B) Colony formation in RASA2-wild type and -knockdown cell lines treated with different doses of irradiation. The survival fraction was evaluated 2 weeks later after irradiation, and the number of colonies at different doses was normalized to the number of colonies in the 0-Gy group. (C) Upper panel: representative flowchart of apoptotic cells stained with annexin V/PI. Bottom panel: quantification of the apoptosis rate. (A-C) One of two representative experiments is shown. GAPDH, glyceraldehyde 3-phosphate dehydrogenase; siRNA, small interfering RNA; RASA2, Ras p21 protein activator; PI, propidium iodide; GOF, gain-of-function.

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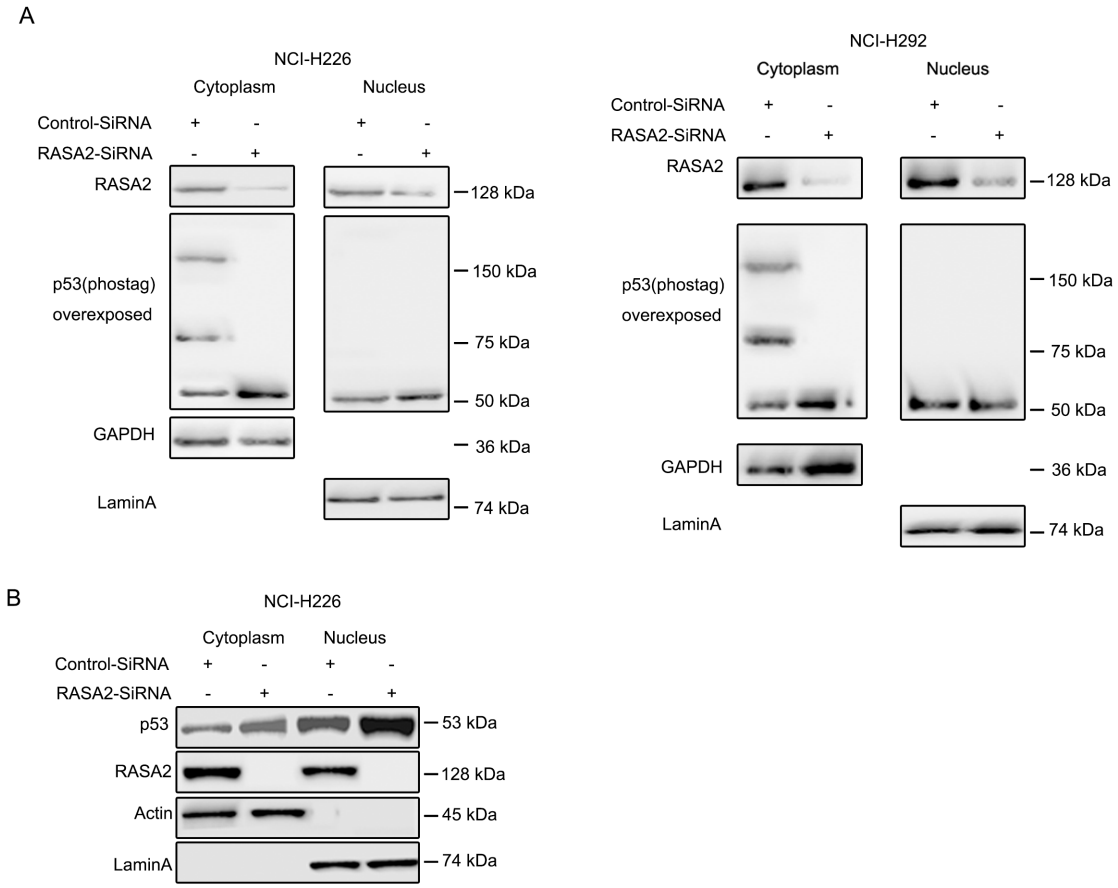

Figure S2 RASA2 phosphorylates p53 and controls its transcriptional activity. (A) p53 phosphorylation in the cytoplasm and nucleus of NCI-H292 and NCI-H226-knockdown and control cell lines according to western blotting. (B) p53 localization in the cytoplasm and the nucleus in the NCI-H226 cell line. (A,B) One of two representative experiments is shown. siRNA, small interfering RNA; RASA2, Ras p21 protein activator; GAPDH, glyceraldehyde 3-phosphate dehydrogenase.

https://dx.doi.org/10.21037/tlcr-24-160