SUPPORTING INFORMATION FOR

Over expression of *miRNA-100* is responsible for the low expression of ATM in the human glioma cell line: M059J

Table S1. Primers information

Primer name	Sequence 5'-3'	Remark
Pri-miR-100 F	CCTAAAGTCCACTGGATTTG	
Pri-miR-100 R	CCAGTTACAAGAGATATGGG	
ATM100-P95WTU	CTAGTAATATTTAAGTGAACTATTGTGGGTTTTT	Wild-type
ATM100-P95WTL	AGCTAAAAACCCACAATAGTTCACTTAAATATTA	
ATM100-P95DeU	CTAGTAAGTAGGGATTAATTTTTGAATGTTGG	Mutant
ATM100-P95DeL	AGCTCCAACATTCAAAAATTAATCCCTACTTA	
ATM100-P1052WTU	CTAGTTCAGCAAGGCTTTATCTATGGGAATCT	Wild-type
ATM100-P1052WTL	AGCTAGATTCCCATAGATAAAGCCTTGCTGAA	
ATM100-P1052DeU	CTAGGTGAGTTTATTTTCTCTTGAGTGTCTGT	Mutant
ATM100-P1052DeL	AGCTACAGACACTCAAGAGAAAATAAACTCAC	
ATM100-P1738WTU	CTAGTCCCAAAGTGCTGGGATTACAGGTGTGA	Wild-type
ATM100-P1738WTL	AGCTTCACACCTGTAATCCCAGCACTTTGGGA	
ATM100-P1738DeU	CTAGCCTCCTCGGCCTCCTGAGCCACCGCGCC	Mutant
ATM100-P1738DeL	AGCTGGCGCGGTGGCTCAGGAGGCCGAGGAGG	
T7miR100F	CGGTTAATACGACTCACTATAGGGAGACACAA	
miR100R	AACCCGTAGATCCGAACTTGTGTCTCC	
T7RNUF	CGGTTAATACGACTCACTATAGGGAGAGGTCAGA	
RNU48F	GGTCAGAGCGCTGCGGTGAT	
RNU48R	GATGACCCCAGGTAACTCTGAGTGTGT	
Hub-actin-F	TGACCCAGATCATGTTTGAGACCT	Housekeeping gene
Hub-actin-R	GACTCCATGCCCAGGAAGGAAG	
ATM-rtF	CAGCTTGATGAGGATCGAACAGAG	RT-PCR
ATM-rtR	TGTGCACCATTCAAGAACACCACT	

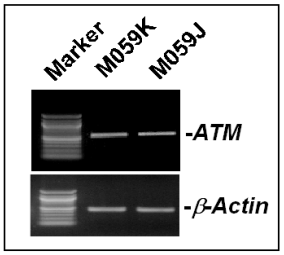

Fig. S1- Comparing the *ATM* mRNA level between M059J and M059K cells. Total RNAs were prepared from M059J or M059K cells. RT-PCR was performed with the proper primers (Table S1). Human *β-Actin* was used as an internal loading control.

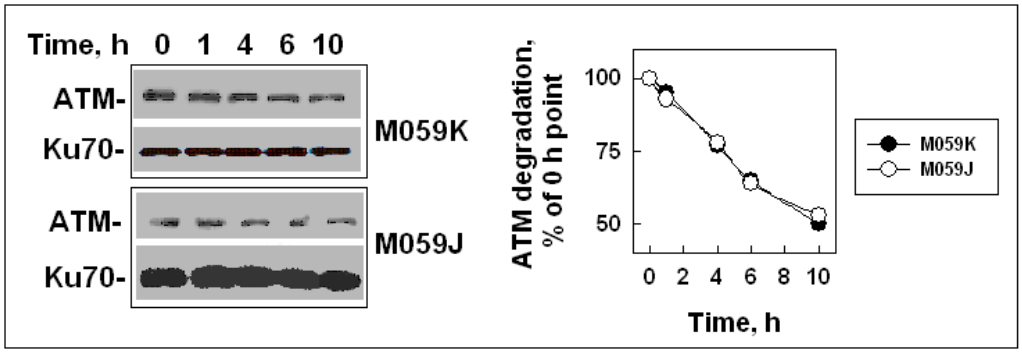

Fig. S2- Comparing the effects of cycloheximide (CHX) on the ATM level changed between M059J and M059K cells. The cells were treated with 100 μg/ml (CHX) (Sigma-Aldrich Inc, St. Louis, MO, USA). At different times the cells were collected and whole cell lyses were prepared. The ATM level was detected by Western blot. Considering the big difference of ATM levels in M059K and M059J cells, in order to observe the relative comparable image, we loaded 10 μg/each point for M059K cells and 40 μg/each point for M059J cells. Ku70 was used as the internal loading control. The quantity of ATM was analyzed by the ImageQuate.

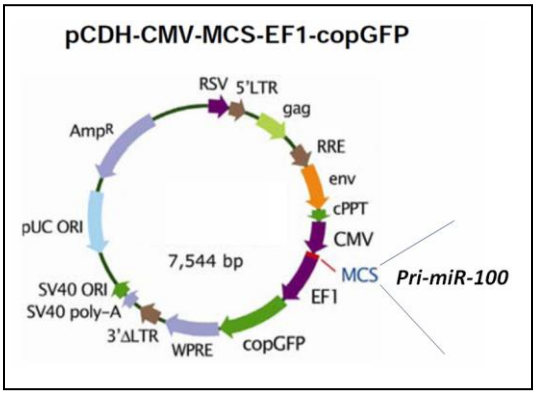

Fig. S3- Description of lentivirus vector construction. To construct a plasmid expressing *miR-100*, we first amplified a DNA fragment carrying pri-*miR-100*, using genomic DNA from a healthy blood donor as a template. PCR reactions were performed using the high fidelity Phusion enzyme (New England Biolabs), and specific primers (Table S1). The amplified fragment was first cloned into a PCR cloning vector and subsequently cloned into pCDHCMV-MCS-EF1-copGFP at the *EcoR1* and *NotI* sites.

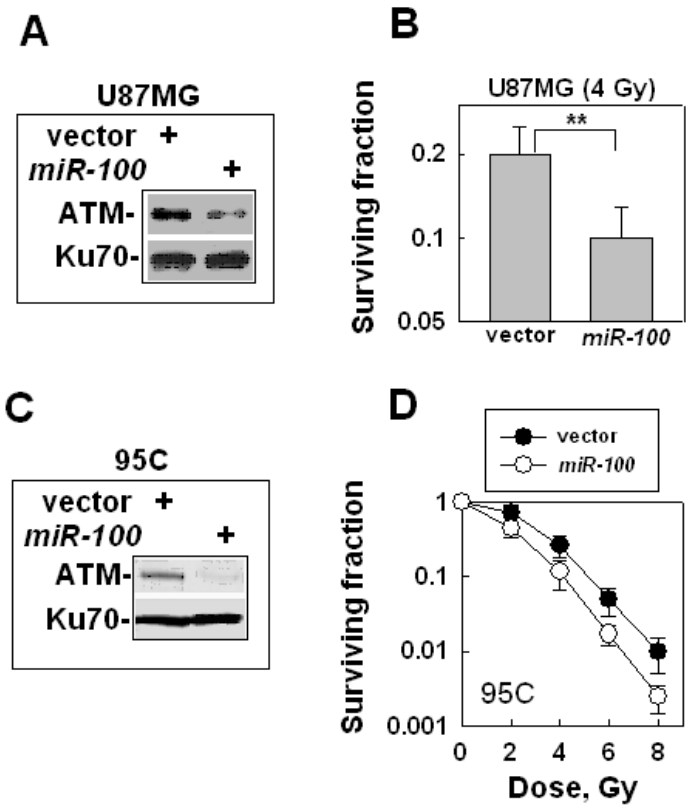

Fig. S4- The effects of *miR-100* on the cell radiosensitivity. (A) The effects of *miR-100* on the ATM level of U87MG cells. U87MG cells were purchased from the American Type Culture Collection (Manassas, VA, USA). The lung cancer cell lines, 95C and 95D, were obtained from Dr. Lu's laboratory. (B) The effects of *miR-100* on the sensitivity of U87MG cells to IR-induced killing. The data represent mean $\pm$ SE of three independent experiments. **, $P < 0.01$, compared with cells transfected with the vector control. (C) The effects of *miR-100* on the ATM level of 95C cells. (D) The effects of *miR-100* on the sensitivity of 95C cells to IR-induced killing. The data represent mean $\pm$ SE of three independent experiments. 95D cells had a similar radiosensitivity to 95C cells and the effects of *miR-100* on 95D cells were similar to that on 95C cells (data not shown).

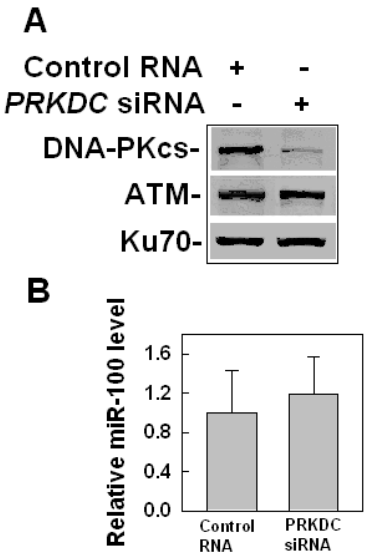

Fig. S5- No influence on the ATM protein level and miR-100 expression after *PRKDC* siRNA (100 nM) treatment in U87MG cells. (A) Western blot analysis of DNA-PKcs, ATM and Ku70 (loading control). The cells were collected for Western blot after 48 hr siRNA treatment. (B) Comparison of the endogenous miR-100 levels in siRNA treated and control cells. Total RNA was isolated after 48 hr of siRNA treatment and qRT-PCR was used to detect the miR-100 expression with triplicate reactions. RNU48 was used as an internal loading control.

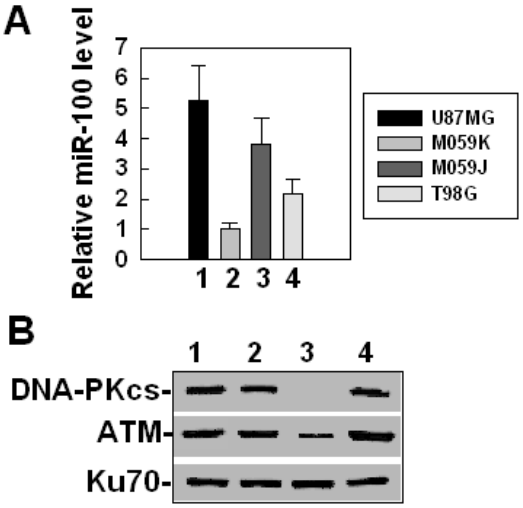

Fig. S6- No direct correlation between the protein level of DNA-PKcs and ATM or miR-100 in different glioma cell lines: 1. U87MG, 2. M059K, 3. M059J, 4. T98G. (A) Western blot analysis of DNA-PKcs, ATM and Ku70 in 4 glioma cell lines. (B)

Comparison of miR-100 endogenous level in 4 glioma cell lines. qRT-PCR was used to detect the miR-100 expression with triplicate reactions. RNU48 was used as an internal loading control.

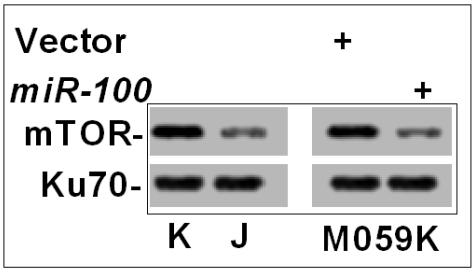

Fig. S7- Comparing the mTOR levels between M059J and M059K cells, and detecting the effect of *miR-100* on the mTOR expression in M059K cells. Western blot was used to detect mTOR expression in these cells. Whole cell lyses were used for the experiments. Ku70 was used as an internal loading control.