#### SUPPLEMENTARY FIGURES





Figure S1. Study of the BRCA1 antibody specificity by WB and IHC. A. Western blotting of total and fractionated protein extracts (N: nucleus; C: cytoplasm). B. Densitometry of the BRCA1 bands normalized with  $\beta$ -actin. C Representative images obtained for BRCA1 immunostaining in cell line blocks. Scale bar 20  $\mu$ m. D Images obtained for BRCA1 immunostaining in the A549 cell line after siRNA downregulation. Scale bar 20  $\mu$ m.



**Figure S2. Study of the CDC6 antibody specificity by WB and IHC**. **A**. Western blotting of total and fractionated protein extracts (C: cytoplasm; N: nucleus). **B**. Densitometry of the values obtained for CDC6 normalized with GAPDH. **C**. Representative immunostaining obtained for CDC6 in cell line blocks. Scale bar 20 µm.



Figure S3. Study of the LIG1 antibody specificity by WB and IHC. A. Western blotting of total and fractionated protein extracts (C: cytoplasm; N: nucleus). B. Densitometry of the values obtained for LIG1 normalized with  $\beta$ -actin. C. Representative immunostaining obtained for LIG1 in cell line blocks. Scale bar 20  $\mu$ m.



**Figure S4. Study of the QKI antibody specificity by WB and IHC**. **A**. Western blotting of total and fractionated protein extracts (C: cytoplasm; N: nucleus). **B**. Densitometry of the values obtained for QKI normalized with GAPDH. **C**. Representative immunostaining obtained for QKI in cell line blocks. Scale bar 20 µm.



Figure S5. Study of the RAD51 antibody specificity by WB and IHC. A. Western blotting of total and fractionated protein extracts (C: cytoplasm; N: nucleus). B. Densitometry of the values obtained for RAD51 normalized with  $\beta$ -actin. C. Representative immunostaining obtained for RAD51 in cell line blocks. Scale bar 20  $\mu$ m.



Figure S6. Study of the RAE1 antibody specificity by WB and IHC. A. Western blotting of total and fractionated protein extracts (C: cytoplasm; N: nucleus). B. Densitometry of the values obtained for RAE1 normalized with  $\beta$ -actin. C. Representative immunostaining obtained for RAE1 in cell line blocks. Scale bar 20  $\mu$ m.



**Figure S7. Study of the RRM2 antibody specificity by WB and IHC**. **A**. Western blotting of total and fractionated protein extracts (C: cytoplasm; N: nucleus). **B**. Densitometry of the values obtained for RRM2 normalized with Lamin A/C. **C**. Representative immunostaining obtained for RRM2 in cell line blocks. Scale bar 20 µm.



**Figure S8. Study of the SIRT2 antibody specificity by WB and IHC**. **A**. Western blotting of total and fractionated protein extracts (C: cytoplasm; N: nucleus). **B**. Densitometry of the values obtained for SIRT2 normalized with Lamin A/C. **C**. Representative immunostaining obtained for SIRT2 in cell line blocks. Scale bar 20 µm.



**Figure S9. Study of the SLC2A1 antibody specificity by WB and IHC**. **A**. Western blotting of total and fractionated protein extracts (N: nucleus; C: cytoplasm). **B**. Densitometry of the values obtained for SLC2A1 normalized with GAPDH. **C**. Representative images of SLC2A1 immunostaining in cell line blocks. Scale bar 20 µm.



Figure S10. Study of the SNRPE antibody specificity by WB and IHC. A. Western blotting of total and fractionated protein extracts (C: cytoplasm; N: nucleus). B. Densitometry of the values obtained for SNRPE normalized with GAPDH. C. Representative immunostaining obtained for SNRPE in cell line blocks. Scale bar 20  $\mu$ m.



Figure S11. Study of the SRSF1 antibody specificity by WB and IHC. A. Western blotting of total and fractionated protein extracts (C: cytoplasm; N: nucleus). B. Densitometry of the values obtained for SRSF1 normalized with  $\beta$ -actin. C. Representative immunostaining obtained for SRSF1 in cell line blocks. Scale bar 20  $\mu$ m.



Figure S12. Study of the STC1 antibody specificity by WB and IHC. A. Western blotting of total and fractionated protein extracts (C: cytoplasm; N: nucleus). B. Densitometry of the values obtained for STC1 normalized with  $\beta$ -actin. C. Representative immunostaining obtained for STC1 in cell line blocks. Scale bar 20  $\mu$ m.



MDA cohort (Stage I)

**Figure S13.** Association between CPI score and survival in stage I patients. A-B. Association between the combined prognostic index (CPI) and DFS (A) and OS (B) in MDA patients. (C-D) Association between the combined prognostic index (CPI) and DFS (C) and OS (D) in CIBERES-CUN patients. Differences between groups were evaluated using the log-rank test. Patients were stratified into two groups according to the median of the CPI.



**Figure S14. Predictive value of the signature in stage I patients from MDA**. Kaplan-Meier curves for high and low CPI groups comparing differences between patients treated or not treated with adjuvant chemotherapy for DFS (top panels) and OS (below panels). Patients were stratified into two groups according to the median of the CPI. Differences between groups were evaluated using the log-rank test.