Supplemental Files:

Figure S1

**Figure S1.** Assessment of MRPL18 knockdown and overexpression efficiency. **(a-b)** Western blot analysis was conducted to evaluate MRPL18 expression in breast cancer cell lines. **(c-d)** Statistical analysis was performed to determine MRPL18 expression levels. All data are presented as mean ± SD, derived from at least three independent experiments. \*\*\**p* < 0.001.

Figure S2

**Figure S2.** Statistical analysis of wound healing assays. **(a)** Low MRPL18 expression group. **(b)** High MRPL18 expression group. All data are presented as the mean ± SD, derived from at least three independent experiments. \*\**p* < 0.01, \*\*\**p* < 0.001.

S3

**Figure S3.** The indicated cells were subjected to [Annexin](https://www.sciencedirect.com/topics/biochemistry-genetics-and-molecular-biology/annexin" \o "Learn more about Annexin from ScienceDirect's AI-generated Topic Pages) V-APC and PI staining to detect the apoptotic rate by flow cytometry. **(a)** knockdown of MRPL18 in MDA-MB-231 and BT-549. **(b)** overexpression of MRPL18 in MDA-MB-231 and BT-549. **(c-f)** Statistical analysis of cell apoptosis rate. \*\*\**p* < 0.001.

**Supplementary Table 1:** Primer sequence.

|  |  |  |
| --- | --- | --- |
| Gene | Forward primer (5′–3′) | Reverse primer (5′–3′) |
| MRPL18-qPCR | TGGCACAGGTTGCGAGTTAT | CCCGCCTCTAAGCATCTCTG |
| MRPL18-CDS | AAGCTTATGGCGCTTCGGTCGCGGT | GGATCCTTATTCATAGATTCTCTGAGG |