

SUPPLEMENTARY TABLES

Supplementary Table 1. Oligo sequences for shRNA-mediated gene knockdown.

| Clone ID | Gene symbol | Target sequence | Region |
|----------------|-----------------------|-----------------------|--------|
| TRCN0000279614 | <i>SUN1</i> | GAACTAGAACAGACCAAGCAA | CDS |
| TRCN0000133655 | <i>SUN1</i> | GCTGTTCTGAAACTTACGAAA | CDS |
| TRCN0000049297 | <i>TOP3A</i> | GCTTCTCGAAAGTTGAGAATA | CDS |
| TRCN0000295900 | <i>TERF2IP (RAP1)</i> | GAGAGTTCTTGCATTGGAAC | 3'UTR |

Supplementary Table 2. Primers used in this study.

| Primer | Sequence |
|--------------------|--|
| | pLAS5w-RAP1 |
| RAP1-NheI-For | CCACGTGGCGATCGCTAGCGCCACCATGGCGGAGGCGATGGATTTGGGCAAAGACCCCAA |
| RAP1-NsiI-Rev | CTGTACATGCATTTATTTCTTTCTAAATTCAATCCTCCGAGCTACATTCTGAGCACC |
| | pLAS5w-SUN1 |
| NheI-SUN1-For | GCTAGCATGGATTTTTCTCGGCTTCA |
| SUN1-EcoRI-Rev | GAATTCTCACTTGACAGGTTGCGCCAT |
| | pLAS5w-RAP1-SUN1 |
| HpaI-RAP1-For | GTTAACATGGCGGAGGCGATGGATTT |
| RAP1-G8-NheI-Rev | GCTAGCACCACCACCACCACCACCACCTTTCTTTTCGAAATTCAATCC |
| NheI-SUN1-For | GCTAGCATGGATTTTTCTCGGCTTCA |
| SUN1-EcoRI-Rev | GAATTCTCACTTGACAGGTTGCGCCAT |
| | pLAS5w-RAP1 Δ C-SUN1 |
| HpaI-RAP1-For | GTTAACATGGCGGAGGCGATGGATTT |
| RCTdel-G8-NheI-Rev | GCTAGCACCACCACCACCACCACCACCACCACCACC TGAGTCTTCCTCAGGTGTGGGTGGATCATC |
| | pcDNA3HA-RAP1 |
| RAP1-BamHI-1F | GGATCCAATGGCGGAGGCGATGGATTTG |
| RAP1-XhoI-R | CTCGAGTTATTTCTTTTCGAAATTC |
| | pcDNA3HA-RAP1 Δ N |
| hRAP1-BamHI-129F | GGATCCACGGCAGCCGGGCGGATC |
| RAP1-XhoI-R | CTCGAGTTATTTCTTTTCGAAATTC |
| | pcDNA3HA-RAP1 Δ Myb |
| Mybdel-F | AGCCGCAGCGGCACGCCGGGAGCATAAGTACCTGCTGGGGGACG |
| Mybdel-R | CCCAGCAGGTACTTATGCTCCCCGGCGTGCCGCTGCGGCTCCGGC |
| | pcDNA3HA-RAP1 Δ Coil and pLAS5w-RAP1 Δ Coil |
| Coildel-F1 | GACCGCTACCTCAAGCACCTGCGGGGCCAGGACTCAGAAACACAGCCTGATGAGGAGGAA |
| Coildel-R1 | TTCTCCTCATCAGGCTGTGTTTCTGAGTCTGGCCCCGAGGTGCTTGAGGTAGCGGTC |
| | pcDNA3HA-RAP1 Δ C |
| RAP1-BamHI-1F | GGATCCAATGGCGGAGGCGATGGATTTG |
| hRAP1-XhoI-289R | CTCGAGTTATTCCTCAGGTGTGGGTGG |