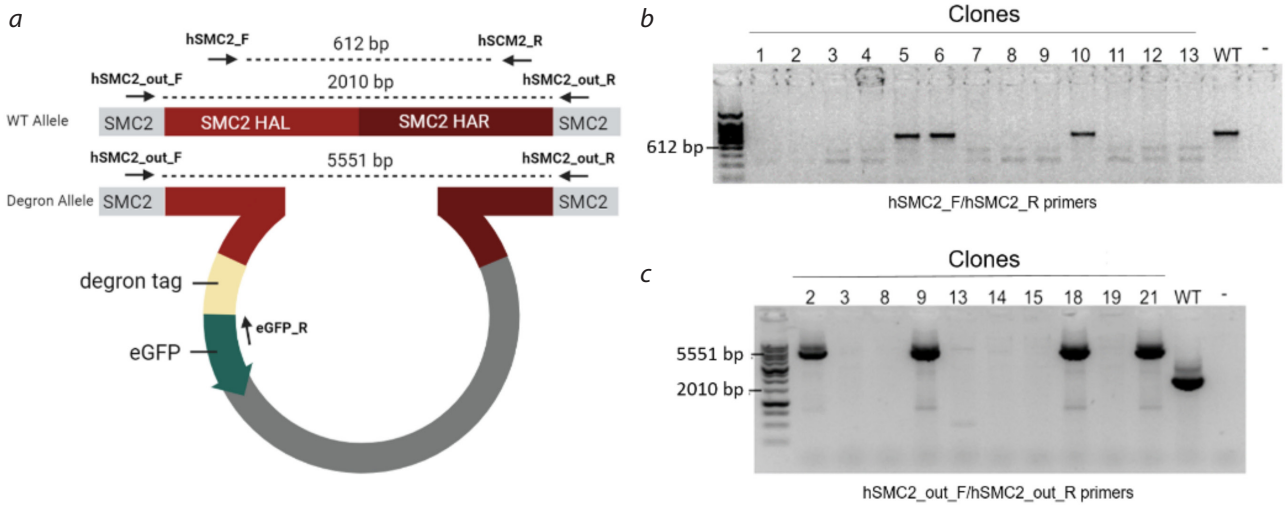
SUPPLEMENTARY MATERIALS
to the article A.M. Yunusova, A.V. Smirnov, I.E. Pristyazhnuk,
T.A. Shnaider, E.K. Maltseva, S.D. Afonnikova, O.A. Gusev, N.R. Battulin
"Assessing cell lines with inducible depletion of cohesin and condensins components
through analysis of metaphase chromosome morphology"

Supplementary Material 1. Alignment of the C-terminal fragment of the *RAD21* mRNA and pseudogene *RAD21P1*. Primers annealing sites indicated.

RAD21P1 NG_022682.2
mRNA RAD21 NM_006265.3

```
RAD21P1  1727  AAAAGGACTCAGCAGATGCTTCACGGTCTTCAGTGAGCTCTTGCTAAAACTGGAGCTGAA  1786
               ||||||||||||||||||||||| |||||||| | ||||||||||||||||||||||||
RAD21     1870 AAAAGGACTCAGCAGATGCTTCATGGTCTTCAGCGTGCTCTTGCTAAAACTGGAGCTGAA 1929
                                                 ______hRAD21_F_______
RAD21P1  1787  TCTATCAGTTTGCTTGAGTTATATCAAAACACAAACAGAAAACAAACTGTTGCAAAGTTC  1846
               |||||||||||||||||||||| || ||| || |||||||||||| |||  |||||||||
RAD21     1930 TCTATCAGTTTGCTTGAGTTATGTCGAAATACGAACAGAAAACAAGCTGCCGCAAAGTTC 1989

RAD21P1  1847  TACAGCTTCTTGGTTCTTAAAAAGCAGCAAGCTATTGAGCTGACACAGGAAGAACTGTAC  1906
               ||||||||||||||||||||||||||||||||||||||||||||||||||| ||||||||
RAD21     1990 TACAGCTTCTTGGTTCTTAAAAAGCAGCAAGCTATTGAGCTGACACAGGAAGAACCGTAC 2049
                                                      _____hRAD21_F2_______
RAD21P1  1907  AGTAACATCATCGCAACACCCGGGCCAAAGTTCCATATTTTATGAGGAGCTAGAAGCATT  1966
               ||| |||||||||||||||| || |||| |||||||||| ||| ||||||||||||||||
RAD21     2050 AGTGACATCATCGCAACACCTGGACCAAGGTTCCATATTATATAAGGAGCTAGAAGCATT 2109

RAD21P1  1967  ATAGCTAGTGTTCATTTCACTAGTGCTTACAAATTGCCCCCATGTGTAGGAGACACAGAA  2026
               |||||||||||   ||||||||||||||||||||||||||||||||| |||||||||
RAD21     2110 ATAGCTAGTGTTTGATTCACTAGTGCTTACAAATTGCCCCCATGTGTAGGGGACACAGAA 2169
                                        _______hRAD21_R1____
RAD21P1  2027  CCCTTTGAGAAAACTTAGATTTTTGTCTGTACAAAGTCTTTGCCTTTTTCTTTC-TCATT  2085
               |||||||||||||||||||||||||||||||||||||||||||||||||||| ||| |||||
RAD21     2170 CCCTTTGAGAAAACTTAGATTTTTGTCTGTACAAAGTCTTTGCCTTTTTCCTTCTTCATT 2229

RAD21P1  2086  TTTTCCCAGTATATTAAATTTGTCAGTTTCATCTTTGAGGGAAACTGATTAGATGGAT-G  2144
               |||| |||||| |||||||||||||| |||||||||||||||||||||||||||| | |
RAD21     2230 TTTTTCCAGTACATTAAATTTGTCAATTTCATCTTTGAGGGAAACTGATTAGATGGGTTG 2289

RAD21P1  2145  TGTT  2148
               ||||
RAD21     2290 TGTT  2293
```

Supplementary Material 2. PCR genotyping of knockin in the *SMC2* gene



a – scheme of primer annealing for the wild-type allele and the knockin allele; *b* – results of genotyping with primers hSMC2_F-hSMC2_R. It can be seen that clones 5, 6, 10 contain the wild-type allele; *c* – genotyping results with primers hSMC2_out_F-hSMC2_out_R. It can be seen that clones 2, 9, 18, 21 contain the full-length degron allele.