

SUPPLEMENTARY TABLES

Supplementary Table 1. Data resource

Data resource	Authors (year)	Identifier
TRACERx 100	Jamal-Hanjani et al., (2017)	PMID: 28445112
TRACERx 100	Biswas et al., (2019)	PMID: 31591602
LUAD progression dataset	Morton et al., (2014)	PMID: 24735754 GEO ID: GSE52248
LUAD progression dataset	Chen et al., (2019)	PMID: 31784532
LUSC progression dataset	Mascaux et al., (2019)	PMID: 31243362 GEO ID: GSE33479
TCGA NSCLC dataset	Campbell et al., (2016)	dbGaP accession no: phs000178.v9.p8
Breast cancer progression dataset	Emery et al., (2009)	PMID: 19700746 GEO ID: GSE16873
Breast cancer progression dataset	Brunner et al., (2014)	PMID: 24887547 GEO ID: GSE47462
Breast cancer progression dataset	Kretschmer et al., (2011)	PMID: 21314937 GEO ID: GSE21422

Supplementary Table 2. List of antibodies used for immunofluorescence

Protein	Company	Cat#	Dilution
APOBEC3	Custom mAb from R.S. Harris lab	5210-87-13	1:1000
Ki67	Thermo Fisher Scientific	14-5698-82	1:5000
p21	BD Biosciences	556430	1:250
53BP1	Novus Biologicals	NB100-305	1:1000
Cyclin A	Santa Cruz	sc-56299	1:1000
FANCD2	Novus Biologicals	NB100-182	1:1000
Total RPA2	Abcam	ab2175	1:1000

Supplementary Table 3. List of antibodies used for western blotting

Protein	Company	Cat#	Dilution
APOBEC3	Custom mAb from R.S. Harris lab	5210-87-13	1:1000
pKAP-1 (S824)	Bethyl	A300-767A	1:2000
pRPA32 (S33)	Bethyl	A300-246A	1:1000
pRPA2 (S4/S8)	Novus Biologicals	NBP123017	1:2000
Total RPA32	CST	2208s	1:1000
γ H2AX	Sigma-Aldrich	05-636	1:2000
GAPDH	Abcam	ab9482	1:1000
Vinculin	Abcam	ab73412	1:2000

Supplementary Table 4. List of primers used for PCR

Gene	Forward primer	Reverse primer
<i>AICDA</i>	TCGGCGTGAGACCTACCTGT	GCCAGGGTCTAGGTCCCAGT
<i>APOBEC3A</i>	GAGAAGGGACAAGCACATGG	TGGATCCATCAAGTGTCTGG
<i>APOBEC3B</i>	GACCCTTTGGTCCTTCGAC	GCACAGCCCCAGGAGAAG
<i>APOBEC3C</i>	AGCGCTTCAGAAAAGAGTGG	AAGTTTCGTTCCGATCGTTG
<i>APOBEC3D</i>	ACCCAAACGTCAAGTCGAATC	CACATTTCTGCGTGGTTCTC
<i>APOBEC3F</i>	CCGTTTGGACGCAAAGAT	CCAGGTGATCTGGAACACTT
<i>APOBEC3G</i>	CCGAGGACCCGAAGGTTAC	TCCAACAGTGCTGAAATTCG
<i>APOBEC3H</i>	AGCTGTGGCCAGAAGCAC	CGGAATGTTTCGGCTGTT
<i>GAPDH</i>	TCACCACCATGGAGAAGGCT	CAGGAGGCATTGCTGATGATC
CDC6	AAACCCGATCCCAGGCACAG	AGGCAGGGCTTTTACACGAGGAG
Q201	CCTCCTCTGGTCTTTTCCCT	
Q202		GAAACCACAAGTACAATCCGG
Q203	TTGGTGCTGCCCCCTC	
Q204		TAGAGACTGAGGCCCAT
Q205	GAAAAGGGACCCATGCACAG	
Q206		CAAACAAGCAACGACCATG
Q209	TGTCCTCTCCCCTTAACCCT	
Q210		TAGAGTCAGGGATGGGGTCA