

Table 1; TK6 mutants (JAN. 2019⁵)

Gene name	Ref.	Laboratory	Gene name	Ref.	Laboratory
53BP1	14	KYOTO	PARP2 +/-		KYOTO
53BP1, BRCA1	14	KYOTO	PDIP38		KYOTO
53BP1, MRE11,		KYOTO	PDIP38, POLH		KYOTO
Abraxas		KYOTO	PDIP38, POLH, XPA,		KYOTO
ALC1		KYOTO, TOKYO	PDIP38, PrimPol		TOKYO
ALC1, PARP1		KYOTO	PDIP38, XPA		KYOTO
APLF		TOKYO	PIAS1	15	KYOTO
APRF, XRCC1		TOKYO	PIAS1, PIAS4	15	KYOTO
ATM		TOKYO	PIAS1, PIAS4	15	KYOTO
ATRX		KYOTO	PIAS1, PIAS4, POLH	15	KYOTO
BLM	6	NIHS	PIAS1, PIAS4, POLH, XPA	15	KYOTO
BLM, EXO1		KYOTO	PIAS1, PIAS4, XPA	15	KYOTO
BLM, MLH1		KYOTO	PIAS4, XPA	15	KYOTO
BLM, MLH3		KYOTO	PMS2		KYOTO
BLM, MUS81		KYOTO	POLB		NIHS, KYOTO
BLM, SMARCAL1		KYOTO	POLD1		KYOTO
BLM, XPF		KYOTO	POLD3		TOKYO
BRCA1	14	KYOTO	POLE		KYOTO
BRCA2		KYOTO	POLH		KYOTO
BRCA1, REV7		KYOTO	POLH, PrimPol		KYOTO, TOKYO
CtIP	8	KYOTO	POLH, PrimPol, RAD54		KYOTO, TOKYO
CtIP, MRE11		KYOTO	POLH, RAD18, XPA		KYOTO, TOKYO
DNA2 +/-		KYOTO	POLH, RAD54		KYOTO, TOKYO
DNA-PKcs	9	KYOTO	POLH, XPA		KYOTO
DNA-PKcs, SMARCAL1	9	KYOTO	POLL		KYOTO
ERCC6		NIHS	POLQ		KYOTO, TOKYO
EXO1		KYOTO	PrimPol		KYOTO, TOKYO
EXO1, FAN1		KYOTO	RAD18		KYOTO
FAN1		KYOTO	RAD18, XPA		KYOTO
FANCC		KYOTO	RAD51AP1		KYOTO
FANCD2	11	KYOTO	RAD51AP1, RAD54		KYOTO
GEN1		KYOTO, HIROSHIMA	RAD51AP1, RAD54, RAD54B		KYOTO
GEN1, MLH3		KYOTO	RAD54	8, 9, 10	KYOTO
GEN1, MLH3, PMS2		KYOTO	RAD54B		KYOTO
GEN1, MUS81		KYOTO	RAP80		KYOTO
GEN1, RAD54		KYOTO	RECQL5		HIROSHIMA
LIG4	9, 10	KYOTO	REV3		KYOTO, TOKYO
LIG4, POLQ		KYOTO, TOKYO	REV7		KYOTO
LIG4, POLQ, RAD54		KYOTO, TOKYO	RNASEH2A		KYOTO
LIG4, RAD54		KYOTO	RNF8		KYOTO
LIG4, RNF8		KYOTO	RNF168		KYOTO
LIG4, SMARCAL1	9	KYOTO	RPA, SMARCAL1		KYOTO
MLH1		KYOTO	SLFN11		KYOTO
MLH1, MLH3		KYOTO	SLX1		KYOTO
MLH1, MLH3, PMS2		KYOTO	SLX4		HIROSHIMA
MLH1, MUS81		KYOTO	SMARCAD1		KYOTO
MLH1, PMS2		KYOTO	SMARCAL1	9	KYOTO
MLH3		KYOTO	SMARCAL1, RAD54		KYOTO
MLH3, PMS2		KYOTO	SPRTAN		KYOTO, TOKYO
MRE11	8	KYOTO	SPRTAN, TDP1, TDP2		KYOTO

MRE11, P53		KYOTO
MRE11, TDP1		KYOTO
MRE11, TDP2	10	KYOTO
MRE11, TIR		KYOTO
MSH2		KYOTO
MSH6		NIHS
MUS81		KYOTO
MUS81, PMS2		KYOTO
NEK1		TOKYO
NEK11		TOKYO
NEK8		TOKYO
OGG1		NIHS
P53		KYOTO
P53, PDIP38		KYOTO
P53, POLH		KYOTO
P53, RAD54B		KYOTO
PALB2		KYOTO
PARP1		KYOTO
PARP1, POLB		KYOTO
PARP1, XRCC1		KYOTO, TOKYO
PARP1, XRCC1, ALC1		KYOTO
PARP2		KYOTO

TDP1	10	KYOTO
TDP1, TDP2		KYOTO
TDP2	10, 12	KYOTO
TIR1		KYOTO
WRN		HIROSHIMA
XPA	13	KYOTO, NIHS
XPA, PARP1		KYOTO
XPA, TDP1, TDP2		KYOTO
XPC		NIHS
XPF		KYOTO
XRCC1		KYOTO
XRCC1, XPA		KYOTO
XRCC1, POLB		KYOTO

Original cell line and its derivatives

TK6 (<i>TK+/-</i>)	1, 2	NIHS, *
TSCE5 (<i>TK+/-</i>)	3, 4	NIHS
TSCE105 (<i>TK+/-</i>)	5	NIHS
TSCER2 (<i>TK-/-</i>)	3, 6	NIHS
TSCER122 (<i>TK-/-</i>)	7	NIHS

* The original TK6 cell line is available from JCRB (<http://cellbank.nibiohn.go.jp/english/>) and ECACC (<https://www.phe-culturecollections.org.uk/collections/ecacc.aspx>)

§ New mutants are highlighted in red.