

Table S1. Target genes selected from DNA damage response pathways for transcript analysis.

Gene Symbol	Alternative Symbol	Entrez Gene Name	Process*	AOD**
APEX1	APE1	APEX nuclease (multifunctional DNA repair enzyme) 1	BER	Hs00172396_m1
BAX		BCL2-associated X protein	apoptosis	Hs00180269_m1
BBC3		BCL2 binding component 3	apoptosis	Hs00248075_m1
CCNG1		cyclin G1	cell cycle	Hs00171112_m1
CDKN1A	p21	cyclin-dependent kinase inhibitor 1A (p21, Cip1)	cell cycle	Hs00355782_m1
CHEK2	CHK2	CHK2 checkpoint homolog (S. pombe)	cell cycle	Hs0200485_m1
DDB2		damage-specific DNA binding protein 2, 48kDa	NER	Hs03044953_m1
ERCC1		excision repair cross-complementing rodent repair deficiency, complementation group 1	NER	Hs01012158_m1
ERCC2	XPD	excision repair cross-complementing rodent repair deficiency, complementation group 2	NER	Hs00361161_m1
ERCC3	XPB	excision repair cross-complementing rodent repair deficiency, complementation group 3	NER	Hs01554450_m1
ERCC4	XPF	excision repair cross-complementing rodent repair deficiency, complementation group 4	NER	Hs01063538_m1
ERCC5	XPG	excision repair cross-complementing rodent repair deficiency, complementation group 5	NER	Hs01557031_m1
ERCC6	CSB	excision repair cross-complementing rodent repair deficiency, complementation group 6	NER	Hs00972920_m1
FDXR		ferredoxin reductase	mitochondrial electron transport	Hs01031624_m1
FEN1		flap structure-specific endonuclease 1	BER	Hs00748727_s1
GADD45A		growth arrest and DNA-damage-inducible, alpha	cell cycle	Hs99999173_m1
LIG1		ligase I, DNA, ATP-dependent	BER	Hs01553527_m1
LIG3		ligase III, DNA, ATP-dependent	BER	Hs00242692_m1
MLH1		mutL homolog 1, colon cancer, nonpolyposis type 2 (E. coli)	MMR	Hs00179866_m1
MSH2		mutS homolog 2, colon cancer, nonpolyposis type 1 (E. coli)	MMR	Hs00953523_m1
MSH3		mutS homolog 3 (E. coli)	MMR	Hs00989003_m1
MSH6		mutS homolog 6 (E. coli)	MMR	Hs00264721_m1
NTHL1	NTH1	nth endonuclease III-like 1 (E. coli)	BER	Hs00959764_m1
OGG1		8-oxoguanine DNA glycosylase	BER	Hs00213454_m1
PARP1		poly (ADP-ribose) polymerase 1	BER	Hs00242302_m1
PARP3		poly (ADP-ribose) polymerase family, member 3	DSB repair	Hs00193946_m1
PCNA		proliferating cell nuclear antigen	BER	Hs00696862_m1
PMS1		PMS1 postmeiotic segregation increased 1 (S. cerevisiae)	MMR	Hs00922262_m1
POLB		polymerase (DNA directed), beta	BER	Hs01099715_m1
POLH		polymerase (DNA directed), eta	BER	Hs00982625_m1
POLI		polymerase (DNA directed) iota	Other	Hs00200488_m1
POLK		polymerase (DNA directed) kappa	Other	Hs00211963_m1
RAD51		RAD51 homolog (S. cerevisiae)	DSB repair	Hs00153418_m1
REV1		REV1 homolog (S. cerevisiae)	Other	Hs00249411_m1
RFC1	RFC	replication factor C (activator 1) 1, 145kDa	NER	Hs00161340_m1
RPAIN	RIP	RPA interacting protein	NER	Hs00260434_m1
XPA		xeroderma pigmentosum, complementation group A	NER	Hs00166045_m1
XPC		xeroderma pigmentosum, complementation group C	NER	Hs01104206_m1
XRCC1		X-ray repair complementing defective repair in Chinese hamster cells 1	BER	Hs00959834_m1
XRCC6	KU70	X-ray repair complementing defective repair in Chinese hamster cells 6	DSB repair	Hs00995282_g1

*BER: base excision repair; NER: nucleotide excision repair; MMR: mismatch repair; DSB repair: double strand break repair

**AOD: Assay On Demand. Applied Biosystems TaqMan identification