

Table SI. Antibody details.

Antibody	Clone	Supplier	Catalog no.	Dilution
CDX2	EP25	Pathnsitu	PR028	RTU
BRCA1	MS110	Sigma-Aldrich; Merck KGaA	OP92	1 in 100
MLH1	GM011	Pathnsitu	PM098	RTU
PMS2	EP51	Pathnsitu	PR067	RTU
MSH2	RED2	Pathnsitu	PR055	RTU
MSH6	EP49	Pathnsitu	PR056	RTU

CDX2, caudal-type homeobox protein 2; MLH1, DNA mismatch repair protein Mlh1; PMS2, mismatch repair endonuclease PMS2; MSH2, DNA mismatch repair protein Msh2; MSH6, DNA mismatch repair protein Msh6; RTU, ready to use.

Table SII. Control miRNA details.

miRNA	Assay name	Assay ID	Control sequence
RNU48	RNU48	001006	GATGACCCCAGGTAACTCTGAGTGTGTCGCTGATG CCATCACCGCAGCGCTCTGACC
miRNA, microRNA.			

Table SIII. DNA damage repair miRNA details.

miRNA	Assay name	Assay ID	Mature miRNA sequence	Stem-loop sequence
miRNA-96	mmu-miR-96-5p	000186	UUUGGCACUAG CACAUUUUUGCU	UGGCCGAUUUUGGCACUA GCACAUUUUUGCUUGUGUCU CUCCGCUCUGAGCAAUCAUGU GCAGUGCCAAUAUGGGAAA
miRNA-182	hsa-miR-182-5p	002334	UUUGGCAAUGGU AGAACUCACACU	GAGCUGCUUGCCUCCCCCGUUU UUGGCAAUGGUAGAACUCACACU GGUGAGGUAACAGGAUCCGGUGG UUCUAGACUUGCCAACUAUGGGG CGAGGACUCAGCCGGCAC
miRNA-183	hsa-miR-183-5p	002269	UAUGGCACUGGU AGAAUUCACU	CCGCAGAGUGUGACUCCUGUUCU GUGUAUGGCACUGGUAGAAUUCA CUGUGAACAGUCUCAGUCAGUGA AUUACCGAAGGGCCAUAAACAGA GCAGAGACAGAUCCACGA
miRNA, microRNA.				