

Table S3

DNA Integrity Genes	CAR genes that are synthetic lethal (SL) with DNA integrity genes						
ARD1	CTK2, 3	CDC73		RVS161	SAC1	SET2	
ASF1	CTK1, 2, 3	CDC73		RVS161		SET2	UME6
BRE1	CTK1, 2, 3				SAC1	SET2	UME6
CCR4	CTK1	CDC73	NOT5	RVS161	SAC1		
CSM1	CTK1, 2, 3						
CTF18	CTK1, 2, 3		CHL1				
CTF8	CTK1, 2		CHL1				
DCC1	CTK1, 2		CHL1			SET2	UME6
DUN1	CTK1, 2, 3	CDC73					
ELG1	CTK1		CHL1				
HEX3/SLX5	CTK1, 2, 3					SET2	
HIR1	CTK1, 2, 3	CDC73					
HIR2	CTK1, 2, 3						
HPR5/SRS2	CTK1, 2, 3		CHL1				
LGE1	CTK1, 2, 3				SAC1	SET2	UME6
LRS4	CTK1, 2, 3						ZUO1
LYS7/CCS1	CTK1, 2, 3						
MDM39/GET1	CTK1, 2, 3	CDC73	NOT5	RVS161	SAC1		UME6
MMS22	CTK3	CDC73					ZUO1
MRE11	CTK1, 2, 3						
NAT1	CTK2	CDC73		RVS161	SAC1	SET2	
POL32	CTK3			RVS161			
POP2/CAF1	CTK1		NOT5	RVS161	SAC1		
RAD18	CTK1, 2, 3	CDC73					
RAD27	CTK1, 2, 3	CDC73	CHL1		SAC1		UME6
RAD50	CTK1, 2, 3						
RAD51	CTK1, 2, 3						
RAD52	CTK1, 2, 3	CDC73					
RAD53	CTK3						
RAD54	CTK1, 2, 3						
RAD55	CTK1, 2, 3						
RAD6	CTK1, 2, 3			RVS161	SAC1	SET2	UME6
RMD7/GET2	CTK1, 2, 3		NOT5	RVS161	SAC1		UME6
RPN4	CTK1, 2, 3			RVS161			UME6
RPN10	CTK3						
SLX4	CTK1, 3						
TSA1	CTK2, 3						
XRS2	CTK1, 2, 3	CDC73					

The 38 DNA integrity genes (Pan, X. et al. *CELL* 124, 1069–1081 [2006]; and SGD [Saccharomyces Genome Database, <<http://www.yeastgenome.org>>]) annotated as displaying synthetic lethality with *CTK1, 2 or 3* are listed alphabetically in column 1. *CTKn* SL interactions with genes in column 1 are in column 2. The subsequent columns list SL interactions between each of 8 CAR genes and the genes in column 1 (*HTZ1* interactions were not included). Interaction data are from SGD and we use "SL" to include synthetic fitness/growth defects.