

Article

# WRN-Mutated Colorectal Cancer Is Characterized by a Distinct Genetic Phenotype

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## Supplementary Material

Table S1. Mutations in the WRN gene.

Protein Change	N (%)	Effect of Mutation
S1128fs	26 (30.9)	Frameshift
R369X	6 (7.1)	Nonsense
Frameshift*	4 (4.7)	
L6fs	4 (4.7)	Frameshift
D163fs	2 (2.38)	Frameshift
R389fs	2 (2.38)	Frameshift
R889X	2 (2.38)	NA
S952X	2 (2.38)	Nonsense
A136fs	1 (1.19)	Frameshift
c.1269+2T>C	1 (1.19)	NA
c.1898+2T>G	1 (1.19)	NA
c.209+2T>A	1 (1.19)	Splicing
c.210-1G>A	1 (1.19)	Splicing
c.3383+2T>C	1 (1.19)	NA
c.355+1G>T	1 (1.19)	Splicing
c.3687+2T>G	1 (1.19)	Splicing
c.3983-1G>T	1 (1.19)	Splicing
E1068X	1 (1.19)	Nonsense
E1217X	1 (1.19)	Nonsense
E244X	1 (1.19)	Nonsense
E371X	1 (1.19)	NA
E399X	1 (1.19)	Nonsense
E488X	1 (1.19)	Nonsense
E48X	1 (1.19)	Nonsense
E513X	1 (1.19)	Frameshift
F1037fs	1 (1.19)	Frameshift
G1377fs	1 (1.19)	Frameshift
I1183fs	1 (1.19)	Frameshift
K135fs	1 (1.19)	Nonsense
K167X	1 (1.19)	Frameshift
K5fs	1 (1.19)	Frameshift
K901fs	1 (1.19)	Frameshift
L967fs	1 (1.19)	Frameshift
M497fs	1 (1.19)	Frameshift

N166fs	1 (1.19)	Frameshift
Q11fs	1 (1.19)	Frameshift
R1305X	1 (1.19)	Nonsense
R279fs	1 (1.19)	Frameshift
R565X	1 (1.19)	Nonsene
R741X	1 (1.19)	Nonsense
R987X	1 (1.19)	NA
T1011fs	1 (1.19)	Frameshift
W1014X	1 (1.19)	Nonsense
Y57X	1 (1.19)	Nonsense
Grand Total	84	

\*4 Frameshift mutations could not be described more precisely.

**Table S2.** List of the 592 genes analyzed.

ABI1
ABL1
ABL2
ACKR3
ACSL3
ACSL6
ADGRA2
AFDN
AFF1
AFF3
AFF4
AKAP9
AKT1
AKT2
AKT3
ALDH2
ALK
AMER1
APC
AR
ARAF
ARFRP1
ARHGAP26
ARHGEF12
ARID1A
ARID2
ARNT
ASPSCR1
ASXL1
ATF1
ATIC
ATM
ATP1A1
ATP2B3
ATR
ATRX
AURKA

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AURKB  
AXIN1  
AXL  
BAP1  
BARD1  
BCL10  
BCL11A  
BCL11B  
BCL2  
BCL2L11  
BCL2L2  
BCL3  
BCL6  
BCL7A  
BCL9  
BCOR  
BCORL1  
BCR  
BIRC3  
BLM  
BMPR1A  
BRAF  
BRCA1  
BRCA2  
BRD3  
BRD4  
BRIP1  
BTG1  
BTK  
BUB1B  
C15orf65  
CACNA1D  
CALR  
CAMTA1  
CANT1  
CARD11  
CARS  
CASP8  
CBFA2T3  
CBFB  
CBL  
CBLB  
CBLC  
CCDC6  
CCNB1IP1  
CCND1  
CCND2  
CCND3  
CCNE1  
CD274  
CD74  
CD79A

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CD79B  
CDC73  
CDH1  
CDH11  
CDK12  
CDK4  
CDK6  
CDK8  
CDKN1B  
CDKN2A  
CDKN2B  
CDKN2C  
CDX2  
CEBPA  
CHCHD7  
CHEK1  
CHEK2  
CHIC2  
CHN1  
CIC  
CIITA  
CLP1  
CLTC  
CLTCL1  
CNBP  
CNOT3  
CNTRL  
COL1A1  
COPB1  
COX6C  
CREB1  
CREB3L1  
CREB3L2  
CREBBP  
CRKL  
CRLF2  
CRTC1  
CRTC3  
CSF1R  
CSF3R  
CTCF  
CTLA4  
CTNNA1  
CTNNB1  
CYLD  
CYP2D6  
DAXX  
DDB2  
DDIT3  
DDR2  
DDX10  
DDX5

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DDX6  
DEK  
DICER1  
DNM2  
DNMT3A  
DOT1L  
EBF1  
ECT2L  
EGFR  
EIF4A2  
ELF4  
ELK4  
ELL  
ELN  
EML4  
EMSY  
EP300  
EPHA3  
EPHA5  
EPHB1  
EPS15  
ERBB2  
ERBB3  
ERBB4  
ERC1  
ERCC1  
ERCC2  
ERCC3  
ERCC4  
ERCC5  
ERG  
ESR1  
ETV1  
ETV4  
ETV5  
ETV6  
EWSR1  
EXT1  
EXT2  
EZH2  
EZR  
FAM46C  
FANCA  
FANCC  
FANCD2  
FANCE  
FANCF  
FANCG  
FANCL  
FAS  
FBXO11  
FBXW7

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FCRL4  
FEV  
FGF10  
FGF14  
FGF19  
FGF23  
FGF3  
FGF4  
FGF6  
FGFR1  
FGFR1OP  
FGFR2  
FGFR3  
FGFR4  
FH  
FHIT  
FIP1L1  
FLCN  
FLI1  
FLT1  
FLT3  
FLT4  
FNBP1  
FOXA1  
FOXL2  
FOXO1  
FOXO3  
FOXO4  
FOXP1  
FSTL3  
FUBP1  
FUS  
GAS7  
GATA1  
GATA2  
GATA3  
GID4  
GMPS  
GNA11  
GNA13  
GNAQ  
GNAS  
GOLGA5  
GOPC  
GPC3  
GPHN  
GRIN2A  
GSK3B  
H3F3A  
H3F3B  
HERPUD1  
HEY1

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HGF  
HIP1  
HIST1H3B  
HIST1H4I  
HLF  
HMGA1  
HMGA2  
HMG2P46  
HNF1A  
HNRNPA2B1  
HOOK3  
HOXA11  
HOXA13  
HOXA9  
HOXC11  
HOXC13  
HOXD11  
HOXD13  
HRAS  
HSP90AA1  
HSP90AB1  
IDH1  
IDH2  
IGF1R  
IKBKE  
IKZF1  
IL2  
IL21R  
IL6ST  
IL7R  
INHBA  
IRF4  
IRS2  
ITK  
JAK1  
JAK2  
JAK3  
JAZF1  
JUN  
KAT6A  
KAT6B  
KCNJ5  
KDM5A  
KDM5C  
KDM6A  
KDR  
KDSR  
KEAP1  
KIAA1549  
KIF5B  
KIT  
KLF4

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KLHL6  
KLK2  
KMT2A  
KMT2C  
KMT2D  
KNL1  
KRAS  
KTN1  
LASP1  
LCK  
LCP1  
LGR5  
LHFPL6  
LIFR  
LMO1  
LMO2  
LPP  
LRIG3  
LRP1B  
LYL1  
MAF  
MAFB  
MALT1  
MAML2  
MAP2K1  
MAP2K2  
MAP2K4  
MAP3K1  
MAX  
MCL1  
MDM2  
MDM4  
MDS2  
MECOM  
MED12  
MEF2B  
MEN1  
MET  
MITF  
MKL1  
MLF1  
MLH1  
MLLT1  
MLLT10  
MLLT11  
MLLT3  
MLLT6  
MN1  
MNX1  
MPL  
MRE11  
MSH2

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MSH6  
MSI2  
MSN  
MTCP1  
MTOR  
MUC1  
MUTYH  
MYB  
MYC  
MYCL  
MYCN  
MYD88  
MYH11  
MYH9  
NACA  
NBN  
NCKIPSD  
NCOA1  
NCOA2  
NCOA4  
NDRG1  
NF1  
NF2  
NFE2L2  
NFIB  
NFKB2  
NFKBIA  
NIN  
NKX2-1  
NONO  
NOTCH1  
NOTCH2  
NPM1  
NR4A3  
NRAS  
NSD1  
NSD2  
NSD3  
NT5C2  
NTRK1  
NTRK2  
NTRK3  
NUMA1  
NUP214  
NUP93  
NUP98  
NUTM1  
NUTM2B  
OLIG2  
OMD  
P2RY8  
PAFAH1B2

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PAK3  
PALB2  
PATZ1  
PAX3  
PAX5  
PAX7  
PAX8  
PBRM1  
PBX1  
PCM1  
PCSK7  
PDCD1  
PDCD1LG2  
PDE4DIP  
PDGFB  
PDGFRA  
PDGFRB  
PDK1  
PER1  
PHF6  
PHOX2B  
PICALM  
PIK3CA  
PIK3CG  
PIK3R1  
PIK3R2  
PIM1  
PLAG1  
PML  
PMS1  
PMS2  
POLE  
POT1  
POU2AF1  
POU5F1  
PPARG  
PPP2R1A  
PRCC  
PRDM1  
PRDM16  
PRF1  
PRKAR1A  
PRKDC  
PRRX1  
PSIP1  
PTCH1  
PTEN  
PTPN11  
PTPRC  
RABEP1  
RAC1  
RAD21

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RAD50  
RAD51  
RAD51B  
RAF1  
RALGDS  
RANBP17  
RAP1GDS1  
RARA  
RB1  
RBM15  
RECQL4  
REL  
RET  
RHOH  
RICTOR  
RMI2  
RNF213  
RNF43  
ROS1  
RPL10  
RPL22  
RPL5  
RPN1  
RPTOR  
RUNX1  
RUNx1T1  
SBDS  
SDC4  
SDHAF2  
SDHB  
SDHC  
SDHD  
SEPT5  
SEPT6  
SEPT9  
SET  
SETBP1  
SETD2  
SF3B1  
SFPQ  
SH2B3  
SH3GL1  
SLC34A2  
SLC45A3  
SMAD2  
SMAD4  
SMARCA4  
SMARCB1  
SMARCE1  
SMO  
SNX29  
SOCS1

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SOX10  
SOX2  
SPECC1  
SPEN  
SPOP  
SRC  
SRGAP3  
SRSF2  
SRSF3  
SS18  
SS18L1  
SSX1  
STAG2  
STAT3  
STAT4  
STAT5B  
STIL  
STK11  
SUFU  
SUZ12  
SYK  
TAF15  
TAL1  
TAL2  
TBL1XR1  
TCEA1  
TCF12  
TCF3  
TCF7L2  
TCL1A  
TERT  
TET1  
TET2  
TFE3  
TFEB  
TFG  
TFPT  
TFRC  
TGFB2  
THRAP3  
TLX1  
TLX3  
TMPRSS2  
TNFAIP3  
TNFRSF14  
TNFRSF17  
TOP1  
TP53  
TPM3  
TPM4  
TPR  
TRAF7

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TRIM26  
TRIM27  
TRIM33  
TRIP11  
TRRAP  
TSC1  
TSC2  
TSHR  
TTL  
U2AF1  
UBR5  
USP6  
VEGFA  
VEGFB  
VHL  
VTI1A  
WAS  
WDCP  
WIF1  
WISP3  
WRN  
WT1  
WWTR1  
XPA  
XPC  
XPO1  
YWHAE  
ZBTB16  
ZMYM2  
ZNF217  
ZNF331  
ZNF384  
ZNF521  
ZNF703  
ZRSR2

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