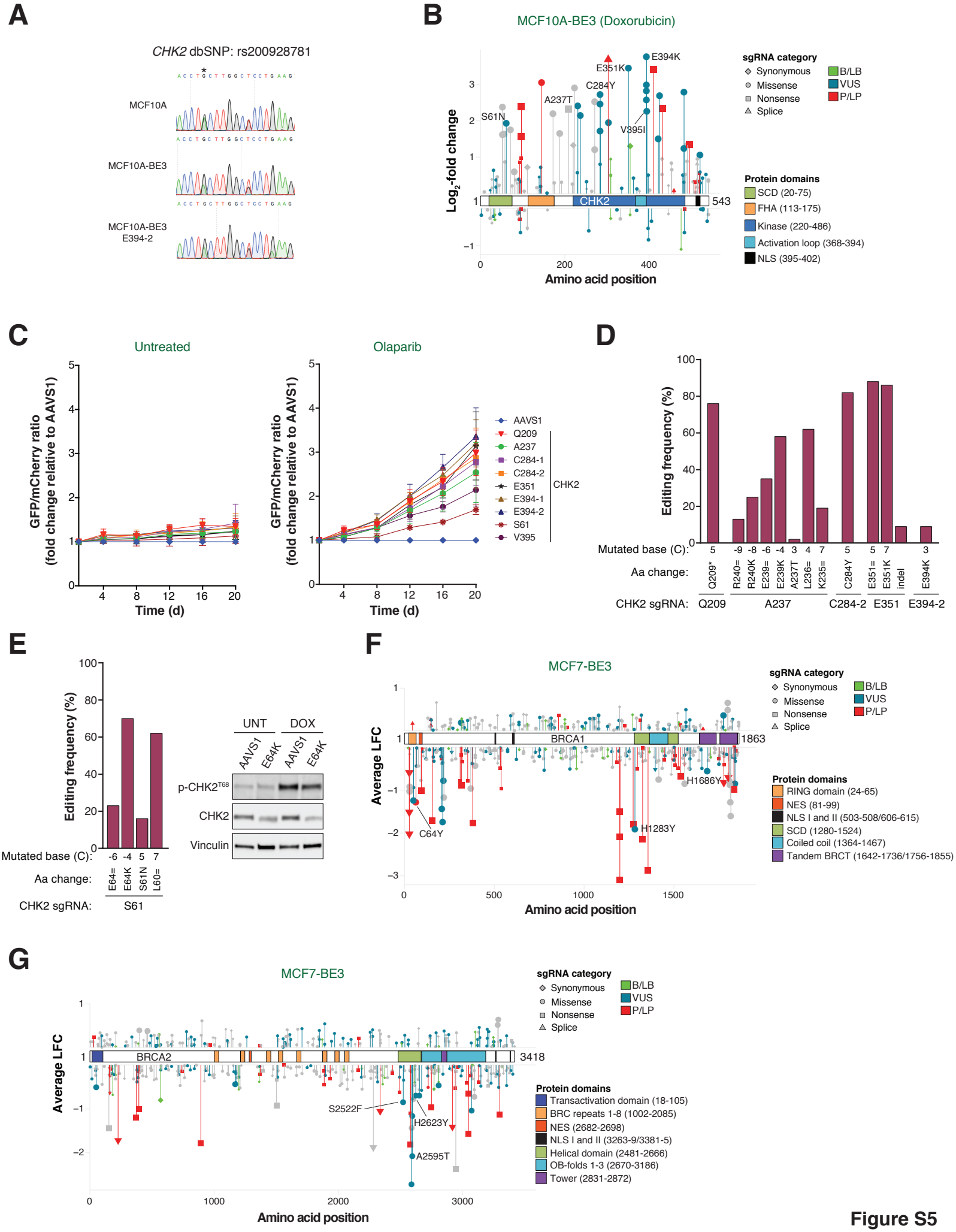
A
CHK2 dbSNP: rs200928781
MCF10A
MCF10A-BE3
MCF10A-BE3 E394-2
B
MCF10A-BE3 (Doxorubicin)
Log2-fold change
Amino acid position
CHK2
543
S61N
A237T
C284Y
E351K
E394K
V395I
sgRNA category
Synonymous
Missense
Nonsense
Splice
B/LB
VUS
P/LP
Protein domains
SCD (20-75)
FHA (113-175)
Kinase (220-486)
Activation loop (368-394)
NLS (395-402)
C
Untreated
Olaparib
GFP/mCherry ratio (fold change relative to AAVS1)
Time (d)
AAVS1
Q209
A237
C284-1
C284-2
E351
E394-1
E394-2
S61
V395
CHK2
D
Editing frequency (%)
Mutated base (C):
Aa change:
CHK2 sgRNA:
Q209
A237
C284-2
E351
E394-2
E
Editing frequency (%)
Mutated base (C):
Aa change:
CHK2 sgRNA:
S61
UNT
DOX
AAVS1
E64K
p-CHK2T68
CHK2
Vinculin
F
MCF7-BE3
Average LFC
Amino acid position
BRCA1
1863
C64Y
H1283Y
H1686Y
sgRNA category
Synonymous
Missense
Nonsense
Splice
B/LB
VUS
P/LP
Protein domains
RING domain (24-65)
NES (81-99)
NLS I and II (503-508/606-615)
SCD (1280-1524)
Coiled coil (1364-1467)
Tandem BRCT (1642-1736/1756-1855)
G
MCF7-BE3
Average LFC
Amino acid position
BRCA2
3418
S2522F
H2623Y
A2595T
sgRNA category
Synonymous
Missense
Nonsense
Splice
B/LB
VUS
P/LP
Protein domains
Transactivation domain (18-105)
BRC repeats 1-8 (1002-2085)
NES (2682-2698)
NLS I and II (3263-9/3381-5)
Helical domain (2481-2666)
OB-folds 1-3 (2670-3186)
Tower (2831-2872)

Figure S5