

DDR master targeted proteomics panel

oM = oxidized Met, p =
phospho,
uK=ubiquitinated Lys (213 analytes)

Gene Symbol	Target protein name	UniProt ID & protein name (with Uniprot hyperlink)	Modification/Variant*
ACTS	Actin, alpha skeletal muscle	P68133	nonmod
ADA	Adenosine deaminase	P00813	oM
ADA	Adenosine deaminase	P00813	nonmod
ATM	Serine-protein kinase ATM	Q13315	pS2996
ATM	Serine-protein kinase ATM	Q13315	nonmod
ATM	Serine-protein kinase ATM	Q13315	pS367
ATM	Serine-protein kinase ATM	Q13315	nonmod
ATR	Serine/threonine-protein kinase ATR	Q13535	pT1989
ATR	Serine/threonine-protein kinase ATR	Q13535	nonmod
ATRIP	ATR-interacting protein	Q8WXE1	pS224
ATRIP	ATR-interacting protein	Q8WXE1	pS518
ATRIP	ATR-interacting protein	Q8WXE1	nonmod
BAD	Bcl2-associated agonist of cell death	Q92934	nonmod
BAX	Apoptosis regulator BAX	Q07812	oM
BAX	Apoptosis regulator BAX	Q07812	nonmod
BCL10	B-cell lymphoma/leukemia 10	Q95999	nonmod
BIRC5	Baculoviral IAP repeat-containing protein 5	Q15392	nonmod
BIRC5	Baculoviral IAP repeat-containing protein 5	Q15392	nonmod
BRCA1	Breast cancer type 1 susceptibility protein	P38398	nonmod
BRCA1	Breast cancer type 1 susceptibility protein	P38398	pS1524
BRCA1	Breast cancer type 1 susceptibility protein	P38398	nonmod
BRCA2	Breast cancer type 2 susceptibility protein	P51587	nonmod
BRCA2	Breast cancer type 2 susceptibility protein	P51587	pS1680
BRCA2	Breast cancer type 2 susceptibility protein	P51587	nonmod
BRIP1/ FANCI	Fanconi anemia group J protein	Q9BX63	pS1032
BRIP1/ FANCI	Fanconi anemia group J protein	Q9BX63	nonmod
BRIP1/ FANCI	Fanconi anemia group J protein	Q9BX63	pT918
BRIP1/ FANCI	Fanconi anemia group J protein	Q9BX63	pS930
BRIP1/ FANCI	Fanconi anemia group J protein	Q9BX63	nonmod
C17orf70 / FAAP100	Fanconi anemia core complex-associated protein 100	Q0VG06	pS667
C17orf70 / FAAP100	Fanconi anemia core complex-associated protein 100	Q0VG06	nonmod
CASC5	Outer kinetochore KNL1 complex subunit KNL1	Q8NG31	pS767
CASC5	Outer kinetochore KNL1 complex subunit KNL1	Q8NG31	nonmod
CASP3	Caspase-3	P42574	pS26
CDC25B	M-phase inducer phosphatase 2	P30305	pS160
CDC25B	M-phase inducer phosphatase 2	P30305	pS323
CDC25B	M-phase inducer phosphatase 2	P30305	nonmod
CDC25C	M-phase inducer phosphatase 3	P30307	pS216
CDC25C	M-phase inducer phosphatase 3	P30307	nonmod
CDCA8	Borealin	Q53HL2	pT106
CDK1	Cyclin-dependent kinase 1	P06493	pT161
CDK1	Cyclin-dependent kinase 1	P06493	nonmod
CDK12	Cyclin-dependent kinase 12	Q9NYV4	nonmod
CDK12	Cyclin-dependent kinase 12	Q9NYV4	nonmod
CDK7	Cyclin-dependent kinase 7	P50613	pT170
CGAS	Cyclic GMP-AMP synthase	Q8N884	nonmod
CHEK1	Serine/threonine-protein kinase Chk1	Q14757	pS286
CHEK1	Serine/threonine-protein kinase Chk1	Q14757	pS317
CHEK1	Serine/threonine-protein kinase Chk1	Q14757	nonmod
CHEK2	Serine/threonine-protein kinase Chk2	Q96017	pS379
CHEK2	Serine/threonine-protein kinase Chk2	Q96017	pT387
CHEK2	Serine/threonine-protein kinase Chk2	Q96017	nonmod
CLU	Clusterin	P10909	nonmod
DDX11	ATP-dependent DNA helicase DDX11	Q96FC9	nonmod
ERCC1	DNA excision repair protein ERCC-1	P07992	nonmod
ERCC2	General transcription and DNA repair factor IIH helicase subunit XPD	P18074	nonmod
ERCC3	General transcription and DNA repair factor IIH helicase/translocase subunit XPB	P19447	nonmod
ERCC4	DNA repair endonuclease XPF	Q92889	nonmod
ERCC6	DNA excision repair protein ERCC-6	Q03468	nonmod
ERCC6	DNA excision repair protein ERCC-6	Q03468	nonmod
FANCA	Fanconi anemia group A protein	Q15360	pS1449
FANCA	Fanconi anemia group A protein	Q15360	nonmod
FANCD2	Fanconi anemia group D2 protein	Q9BXW9	uK561
FANCD2	Fanconi anemia group D2 protein	Q9BXW9	nonmod
FANCI	Fanconi anemia group I protein	Q9NVI1	pS730
FAS	Tumor necrosis factor receptor superfamily member 6	P25445	nonmod
FAS	Tumor necrosis factor receptor superfamily member 6	P25445	pY291

FAS	Tumor necrosis factor receptor superfamily member 6	P25445	nonmod
FEN1	Flap endonuclease 1	P39748	nonmod
FH	Fumarate hydratase, mitochondrial	P07954	nonmod
FOXO1	Forkhead box protein O1	Q12778	nonmod
FOXO3	Forkhead box protein O3	O43524	pS253
FOXO3	Forkhead box protein O3	O43524	pS253
GAPDH	Glyceraldehyde-3-phosphate dehydrogenase	P04406	nonmod
GIT2	ARF GTPase-activating protein GIT2	Q14161	nonmod
GSTP1	Glutathione S-transferase P	P09211	nonmod
H2AX	H2A Histone Family, Member X	P16104	pS140
HUS1	Checkpoint protein HUS1	O60921	nonmod
JUN	Transcription factor Jun	P05412	pS63
JUN	Transcription factor Jun	P05412	nonmod
LAT	Linker for activation of T-cells family member 1	O43561	pS224
LIG1	DNA ligase 1	P18858	nonmod
LIG3	DNA ligase 3	P49916	nonmod
LIG4	DNA ligase 4	P49917	nonmod
LMNB1	Lamin-B1	P20700	pT20pS23
LMNB1	Lamin-B1	P20700	pT20
LMNB1	Lamin-B1	P20700	pS23
LMNB1	Lamin-B1	P20700	nonmod
MCL1	Induced myeloid leukemia cell differentiation protein Mcl-1	Q07820	nonmod
MCM6	DNA replication licensing factor MCM6	Q14566	pS762
MCM6	DNA replication licensing factor MCM6	Q14566	nonmod
MDC1	Mediator of DNA damage checkpoint protein 1	Q14676	pS329
MDC1	Mediator of DNA damage checkpoint protein 1	Q14676	nonmod
MDM2	E3 ubiquitin-protein ligase Mdm2	Q00987	pS166
MDM2	E3 ubiquitin-protein ligase Mdm2	Q00987	nonmod
MGMT	Methylated-DNA--protein-cysteine methyltransferase	P16455	nonmod
MKI67	Proliferation marker protein Ki-67	P46013	pT1801
MKI67	Proliferation marker protein Ki-67	P46013	nonmod
MKI67	Proliferation marker protein Ki-67	P46013	pT2406
MLH1	DNA mismatch repair protein Mlh1	P40692	nonmod
MRE11A	Double-strand break repair protein MRE11	P49959	pS676
MRE11A	Double-strand break repair protein MRE11	P49959	nonmod
MRE11A	Double-strand break repair protein MRE11	P49959	nonmod
MSH2	DNA mismatch repair protein Msh2	P43246	nonmod
MSH3	DNA mismatch repair protein Msh3	P20585	nonmod
MSH6	DNA mismatch repair protein Msh6	P52701	nonmod
MUTYH	Adenine DNA glycosylase	Q9UIF7	oM521R531Q
MUTYH	Adenine DNA glycosylase	Q9UIF7	oM521
MUTYH	Adenine DNA glycosylase	Q9UIF7	
MUTYH	Adenine DNA glycosylase	Q9UIF7	nonmod
NBN	Nibrin	Q60934	pS432
NBN	Nibrin	Q60934	pT434
NBN	Nibrin	Q60934	nonmod
NBN	Nibrin	Q60934	pS343
NBN	Nibrin	Q60934	nonmod
NCAPH2	Condensin-2 complex subunit H2	Q6IBW4	pS492
NCAPH2	Condensin-2 complex subunit H2	Q6IBW4	nonmod
NFKB1	Nuclear factor NF-kappa-B p105 subunit	P19838	nonmod
NIPBL	Nipped-B-like protein	Q6KC79	nonmod
NUMA1	Nuclear mitotic apparatus protein 1	Q14980	pS395
PAK4	Serine/threonine-protein kinase PAK 4	Q96013	pS181
PALB2	Partner and localizer of BRCA2	Q86YC2	pS376
PALB2	Partner and localizer of BRCA2	Q86YC2	nonmod
PARP1	Poly [ADP-ribose] polymerase 1	P09874	pS177
PARP1	Poly [ADP-ribose] polymerase 1	P09874	nonmod
PARP1	Poly [ADP-ribose] polymerase 1	P09874	pS41
PARP2	Poly [ADP-ribose] polymerase 2	Q9UGN5	nonmod
PAXIP1	PAX-interacting protein 1	Q6ZW49	nonmod
PCNA	Proliferating cell nuclear antigen	P12004	nonmod
PCNA	Proliferating cell nuclear antigen	P12004	uK164
PCNA	Proliferating cell nuclear antigen	P12004	nonmod
PK3CA	Phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit alpha isoform	P42336	nonmod
PMS1	PMS1 protein homolog 1	P54277	nonmod
PMS2	Mismatch repair endonuclease PMS2	P54278	nonmod
POLB	DNA polymerase beta	P06746	nonmod
POLD1	DNA polymerase delta catalytic subunit	P28340	nonmod
POLQ	DNA polymerase theta	Q75417	nonmod
PTEN	Phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase	P60484	nonmod
PTEN	Phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase	P60484	nonmod
PTEN	Phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase	P60484	nonmod

PTEN	Phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase	P60484	nonmod
PTPRC	Receptor-type tyrosine-protein phosphatase C	P08575	nonmod
PTPRC	Receptor-type tyrosine-protein phosphatase C	P08575	nonmod
RAD1	Cell cycle checkpoint protein RAD1	Q60671	nonmod
RAD18	E3 ubiquitin-protein ligase RAD18	Q9NS91	pS471
RAD18	E3 ubiquitin-protein ligase RAD18	Q9NS91	nonmod
RAD18	E3 ubiquitin-protein ligase RAD18	Q9NS91	pS99
RAD18	E3 ubiquitin-protein ligase RAD18	Q9NS91	nonmod
RAD23B	UV excision repair protein RAD23 homolog B	P54727	nonmod
RAD23B	UV excision repair protein RAD23 homolog B	P54727	nonmod
RAD50	DNA repair protein RAD50	Q92878	pS635
RAD50	DNA repair protein RAD50	Q92878	nonmod
RAD50	DNA repair protein RAD50	Q92878	EB0904-1D5-H3/K3
RAD51	DNA repair protein RAD51 homolog 1	Q06609	nonmod
RAD51	DNA repair protein RAD51 homolog 1	Q06609	nonmod
RAD51C	DNA repair protein RAD51 homolog 3	Q43502	pS20
RAD51C	DNA repair protein RAD51 homolog 3	Q43502	nonmod
RAD9A	Cell cycle checkpoint control protein RAD9A	Q99638	pS387
RAD9A	Cell cycle checkpoint control protein RAD9A	Q99638	nonmod
RB1	Retinoblastoma-associated protein	P06400	pS807
RB1	Retinoblastoma-associated protein	P06400	nonmod
RECQL	ATP-dependent DNA helicase Q1	P46063	nonmod
REV3L	DNA polymerase zeta catalytic subunit	Q60673	pS1724
REV3L	DNA polymerase zeta catalytic subunit	Q60673	nonmod
RIF1	Telomere-associated protein RIF1	Q5UIP0	pS1542
RIF1	Telomere-associated protein RIF1	Q5UIP0	nonmod
RNASEH2A	Ribonuclease H2 subunit A	Q75792	nonmod
RNF168	E3 ubiquitin-protein ligase RNF168	Q8IYW5	nonmod
RPA1	Replication protein A 70 kDa DNA-binding subunit	P27694	nonmod
RRM2	Ribonucleoside-diphosphate reductase subunit M2	P31350	nonmod
RRM2	Ribonucleoside-diphosphate reductase subunit M2	P31350	nonmod
RTF1	RNA polymerase-associated protein RTF1 homolog	Q92541	pS655
RTF1	RNA polymerase-associated protein RTF1 homolog	Q92541	pS655
SAAL1	Protein SAAL1	Q96ER3	pS237
SAAL1	Protein SAAL1	Q96ER3	nonmod
SDHB	Succinate dehydrogenase [ubiquinone] iron-sulfur subunit, mitochondrial	P21912	nonmod
SLFN11	Schlafen family member 11	Q7Z7L1	nonmod
TERF2	Telomeric repeat-binding factor 2	Q15554	pS323
TERF2	Telomeric repeat-binding factor 2	Q15554	nonmod
TGFB1	Transforming growth factor beta-1 proprotein [Cleaved into: Latency-associated peptide]	P01137	nonmod
TIPRL	TIP41-like protein	Q75663	nonmod
TIRR	Tudor-interacting repair regulator protein	Q9BRJ7	nonmod
TNF10	Tumor necrosis factor ligand superfamily member 10	P50591	nonmod
TNFRSF17	Tumor necrosis factor receptor superfamily member 17	Q02223	pS173
TNFRSF17	Tumor necrosis factor receptor superfamily member 17	Q02223	nonmod
TOP1	DNA topoisomerase 1	P11387	nonmod
TOPBP1	DNA topoisomerase 2-binding protein 1	Q92547	pT1062
TOPBP1	DNA topoisomerase 2-binding protein 1	Q92547	nonmod
TOPBP1	DNA topoisomerase 2-binding protein 1	Q92547	pS1138
TOPBP1	DNA topoisomerase 2-binding protein 1	Q92547	nonmod
TP53	Cellular tumor antigen p53	P04637	pS315
TP53	Cellular tumor antigen p53	P04637	nonmod
TP53	Cellular tumor antigen p53	P04637	pS15
TP53	Cellular tumor antigen p53	P04637	nonmod
TP53BP1	TP53-binding protein 1	Q12888	pT543pS552
TP53BP1	TP53-binding protein 1	Q12888	pT543
TP53BP1	TP53-binding protein 1	Q12888	pS552
TP53BP1	TP53-binding protein 1	Q12888	nonmod
TP53BP1	TP53-binding protein 1	Q12888	nonmod
TUBB	Tubulin beta chain	P07437	nonmod
UBE2C	Ubiquitin-conjugating enzyme E2 C	Q00762	nonmod
UBE2C	Ubiquitin-conjugating enzyme E2 C	Q00762	nonmod
UBE2I	SUMO-conjugating enzyme UBC9	P63279	nonmod
UBE2T	Ubiquitin-conjugating enzyme E2 T	Q9NPD8	pS184
UBE2T	Ubiquitin-conjugating enzyme E2 T	Q9NPD8	nonmod
UTP14A	U3 small nucleolar RNA-associated protein 14 homolog A	Q9BVJ6	pS453
UTP14A	U3 small nucleolar RNA-associated protein 14 homolog A	Q9BVJ6	nonmod
XRCC1	DNA repair protein XRCC1	P18887	nonmod
XRCC5	X-ray repair cross-complementing protein 5	P13010	nonmod
XRCC6	X-ray repair cross-complementing protein 6	P12956	nonmod
XRCC6	X-ray repair cross-complementing protein 6	P12956	nonmod
XRCC6	X-ray repair cross-complementing protein 6	P12956	nonmod
XRCC6	X-ray repair cross-complementing protein 6	P12956	nonmod

References:

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