

**Supplementary Table 1****List of antibodies.**

Antibodies varied across cell lines, as indicated in the table.

Participants were provided with a "Main" training dataset consisting of phosphoprotein antibodies only. In case further antibody details, including source, catalog number and validation status, can be found in Hill, Nesser et

Antibody Name	Gene Name	Phospho-protein?
14-3-3-beta	YWHA B	0
14-3-3-epsilon	YWHA E	0
14-3-3-zeta	YWHA Z	0
4EBP1	EIF4EBP1	0
4EBP1_pS65	EIF4EBP1_pS65	1
4EBP1_pT37_pT46	EIF4EBP1_pT37_pT46	1
53BP1	TP53BP1	0
ACC_pS79	ACACA.ACACB_pS79	1
ACC1	ACACA.ACACB	0
ACVRL1	ACVRL1	0
AIB1	NCOA3	0
AKT	AKT1.AKT2.AKT3	0
AKT_pS473	AKT1.AKT2.AKT3_pS473	1
AKT_pT308	AKT1.AKT2.AKT3_pT308	1
alpha-catenin	CTNNA1	0
AMPK_pT172	PRKAA1.PRKAA2_pT172	1
AMPK-alpha	PRKAA1.PRKAA2	0
Annexin-I	ANXA1	0
Annexin-VII	ANXA7	0
AR	AR	0
B-Raf	BRAF	0
BAD_pS112	BAD_pS112	1
BAK	BAK1	0
BAX	BAX	0
BCL-2	BCL2	0
Bcl-X	BCL2L1	0
Bcl-xL	BCL2L1	0
Beclin	BECN1	0
beta-catenin	CTNNB1	0
BID	BID	0
BIM	BCL2L11	0
c-JUN_pS73	JUN_pS73	1
c-KIT	KIT	0
c-Met	MET	0
c-Met_pY1235	MET_pY1235	1
c-Myc	MYC	0
c-Raf	RAF1	0

c-Raf_pS338	RAF1_pS338	1
Caspase-3_active	CASP3	0
Caspase-7_cleavedD198	CASP7	0
Caspase-9_cleavedD330	CASP9	0
Caveolin-1	CAV1	0
CD31	PECAM1	0
CD49B	ITGA2	0
CDK1	CDK1	0
CHK1	CHEK1	0
CHK1_pS345	CHEK1_pS345	1
CHK2	CHEK2	0
CHK2_pT68	CHEK2_pT68	1
cIAP	BIRC2	0
Claudin-7	CLDN7	0
Collagen-VI	COL6A1	0
COX-2	PTGS2	0
Cyclin-B1	CCNB1	0
Cyclin-D1	CCND1	0
Cyclin-E1	CCNE1	0
DJ-1	PARK7	0
Dvl3	DVL3	0
E-Cadherin	CDH1	0
eEF2	EEF2	0
eEF2K	EEF2K	0
EGFR	EGFR	0
EGFR_pY1068	EGFR_pY1068	1
EGFR_pY1173	EGFR_pY1173	1
EGFR_pY992	EGFR_pY992	1
eIF4E	EIF4E	0
eIF4G	EIF4G1	0
ER-alpha	ESR1	0
ER-alpha_pS118	ESR1_pS118	1
ERCC1	ERCC1	0
FAK	PTK2	0
Fibronectin	FN1	0
FoxM1	FOXM1	0
FOXO3a	FOXO3	0
FOXO3a_pS318_S321	FOXO3_pS318_pS321	1
Gab2	GAB2	0
GATA3	GATA3	0
GSK3-alpha-beta_pS9	GSK3A.GSK3B_pS9	1
GSK3-alpha-beta	GSK3A.GSK3B	0
GSK3-alpha-beta_pS21_S9	GSK3A.GSK3B_pS9_pS21	1
HER2	ERBB2	0
HER2_pY1248	ERBB2_pY1248	1
HER3	ERBB3	0

HER3_pY1298	ERBB3_pY1298	1
IFG-1R-beta	IGF1R	0
IGFBP2	IGFBP2	0
INPP4B	INPP4B	0
IRS1	IRS1	0
JNK_pT183_pT185	MAPK8_pT183_pT185	1
JNK2	MAPK9	0
k-Ras	KRAS	0
Lck	LCK	0
MAPK_pT202_Y204	MAPK1.MAPK3_pT202_Y204	1
MEK1	MAP2K1	0
MEK1_pS217_S221	MAP2K1_pS217_S221	1
MGMT	MGMT	0
MIG-6	ERRFI1	0
Mre11	MRE11A	0
MSH2	MSH2	0
MSH6	MSH6	0
mTOR	MTOR	0
mTOR_pS2448	MTOR_pS2448	1
MYH11	MYH11	0
N-Cadherin	CDH2	0
N-Ras	NRAS	0
NDRG1_pT346	NDRG1_pT346	1
NF-kB-p65_pS536	RELA_p65_pS536	1
NF2	NF2	0
Notch1	NOTCH1	0
Notch3	NOTCH3	0
P-Cadherin	CDH3	0
p21	CDKN1A	0
p27	CDKN1B	0
p27_pT157	CDKN1B_pT157	1
p27_pT198	CDKN1B_pT198	1
p38_MAPK	MAPK14	0
p38_pT180_Y182	MAPK14_pT180_Y182	1
p53	TP53	0
p70S6K	RPS6KB1	0
p70S6K_pT389	RPS6KB1_pT389	1
p90RSK_pT359_S363	RPS6KA1_pT359_S363	1
PARP_cleaved	PARP1	0
Paxillin	PXN	0
PCNA	PCNA	0
PDCD4	PDCD4	0
PDK1	PDK1	0
PDK1_pS241	PDK1_pS241	1
PEA15	PEA15	0
PEA15_pS116	PEA15_pS116	1

PI3K_p110-alpha	PIK3CA	0
PI3K_p85	PIK3R1	0
PKC-alpha	PRKCA	0
PKC-alpha_pS657	PRKCA_pS657	1
PKC-delta_pS664	PRKCD_pS664	1
PKC-pan-betaII_pS660	PRKCA.PRKCB.PRKCD.PRKCE.PRKCH.PRKCQ_pS660	1
PR	PGR	0
PRAS40_pT246	AKT1S1_pT246	1
PTCH	PTCH1	0
PTEN	PTEN	0
Rab11	RAB11A.RAB11B	0
Rab25	RAB25	0
Rad50	RAD50	0
Rad51	RAD51	0
Raptor	RPTOR	0
Rb	RB1	0
Rb_pS807_S811	RB1_pS807_S811	1
RBM15	RBM15	0
Rictor	RICTOR	0
Rictor_pT1135	RICTOR_pT1135	1
S6_pS235_S236	RPS6_pS235_S236	1
S6_pS240_S244	RPS6_pS240_S244	1
SCD1	SCD	0
SF2	SRSF1	0
Smac	DIABLO	0
Smad1	SMAD1	0
Smad3	SMAD3	0
Smad4	SMAD4	0
Snail	SNAI1	0
Src	SRC	0
Src_pY416	SRC_pY416	1
Src_pY527	SRC_pY527	1
STAT3_pY705	STAT3_pY705	1
STAT5-alpha	STAT5A	0
Stathmin	STMN1	0
Syk	SYK	0
Tau	MAPT	0
TAZ	WWTR1	0
TAZ_pS89	WWTR1_pS89	1
TFRC	TFRC	0
TIGAR	C12orf5	0
Transglutaminase II	TGM2	0
TSC1	TSC1	0
TTF1	TTF1	0
Tuberin	TSC2	0
VASP	VASP	0

VEGFR2	KDR	0
VHL	VHL	0
XIAP	XIAP	0
XRCC1	XRCC1	0
YAP	YAP1	0
YAP_pS127	YAP1_pS127	1
YB-1	YBX1	0
YB-1_PS102	YBX1_PS102	1

e some participants found the additional data useful,  
: al. (Submitted).

Antibody available?			
UACC812	BT549	MCF7	BT20
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1	1	1	1
1	1	1	1
1	1	1	1

measurements for the remaining antibodies were also made available in a "Full" training dataset.

[illegible]

Cross-reacts with HER2pY1248
Cross-reacts with HER2pY1428
Antibody flagged as no longer meeting quality control - excluded from scoring
Cross-reacts with EGFRpY1068 and EGFRpY992

[illegible]



Antibody flagged as no longer meeting quality control
Antibody flagged as no longer meeting quality control