

RAS/MAPK panel 1

oM = oxidized Met,
p = phospho (50 analytes)

Gene Symbol	Target protein name	UniProt ID (& link)	Modification*
AKT1	RAC-alpha serine/threonine-protein kinase	P31749	nonmod
AKT1	RAC-alpha serine/threonine-protein kinase	P31749	pS473
AKT1	RAC-alpha serine/threonine-protein kinase	P31749	nonmod
AKT1	RAC-alpha serine/threonine-protein kinase	P31749	pT308
AKT2	activating transcription factor 2	P31751	nonmod
AKT2	activating transcription factor 2	P31751	pS473
AKT2	activating transcription factor 2	P31751	nonmod
AKT3	RAC-gamma serine/threonine-protein kinase	Q9Y243	nonmod
AKT3	RAC-gamma serine/threonine-protein kinase	Q9Y243	nonmod
AKT3	RAC-gamma serine/threonine-protein kinase	Q9Y243	pS472
ARAF	Serine/threonine-protein kinase A-Raf	P10398	nonmod
ARAF	Serine/threonine-protein kinase A-Raf	P10398	pS299
ARAF	Serine/threonine-protein kinase A-Raf	P10398	nonmod
ARAF	Serine/threonine-protein kinase A-Raf	P10398	pS299
BRAF	v-raf murine sarcoma viral oncogene homolog B1	P15056	nonmod
BRAF	v-raf murine sarcoma viral oncogene homolog B1	P15056	pT401
BRAF	v-raf murine sarcoma viral oncogene homolog B1	P15056	nonmod
BRAF	v-raf murine sarcoma viral oncogene homolog B1	P15056	nonmod
BRAF	v-raf murine sarcoma viral oncogene homolog B1	P15056	pS446
EGFR	epidermal growth factor receptor (erythroblastic leukemia viral (v-erb-b) oncogene homolog, avian)	P00533	pY1172
EGFR	epidermal growth factor receptor (erythroblastic leukemia viral (v-erb-b) oncogene homolog, avian)	P00533	nonmod
EGFR	epidermal growth factor receptor (erythroblastic leukemia viral (v-erb-b) oncogene homolog, avian)	P00533	nonmod
EGFR	epidermal growth factor receptor (erythroblastic leukemia viral (v-erb-b) oncogene homolog, avian)	P00533	pY1197
EGFR	epidermal growth factor receptor (erythroblastic leukemia viral (v-erb-b) oncogene homolog, avian)	P00533	pY1092
EGFR	epidermal growth factor receptor (erythroblastic leukemia viral (v-erb-b) oncogene homolog, avian)	P00533	nonmod
ERBB2	v-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)	P04626	nonmod
ERBB2	v-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)	P04626	pY1248
ERBB2	v-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)	P04626	nonmod
ERBB2	v-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)	P04626	pY877
FOXO3	forkhead box O3	Q43524	pS253
GSK3B	glycogen synthase kinase 3 beta	P49841	nonmod
GSK3B	glycogen synthase kinase 3 beta	P49841	pS9
MAPK1	mitogen-activated protein kinase 1	P28482	pT185/pY187
MAPK1	mitogen-activated protein kinase 1	P28482	pT185
MAPK1	mitogen-activated protein kinase 1	P28482	pY187
MAPK1	mitogen-activated protein kinase 1	P28482	nonmod
MAPK3	mitogen-activated protein kinase 3	P27361	pT202/pY204
MAPK3	mitogen-activated protein kinase 3	P27361	nonmod
MAPK3	mitogen-activated protein kinase 3	P27361	pT202
MAPK3	mitogen-activated protein kinase 3	P27361	pY204
MAPK8	mitogen-activated protein kinase 8	P45983	pT183/pY185
MAPK8	mitogen-activated protein kinase 8	P45983	nonmod
MTOR	mechanistic target of rapamycin (serine/threonine kinase)	P42345	pS2448
MTOR	mechanistic target of rapamycin (serine/threonine kinase)	P42345	nonmod
MTOR	mechanistic target of rapamycin (serine/threonine kinase)	P42345	pS2481
MTOR	mechanistic target of rapamycin (serine/threonine kinase)	P42345	nonmod
MTOR	mechanistic target of rapamycin (serine/threonine kinase)	P42345	pS2448
MTOR	mechanistic target of rapamycin (serine/threonine kinase)	P42345	nonmod
RAF1	v-raf-1 murine leukemia viral oncogene homolog 1	P04049	nonmod
RAF1	v-raf-1 murine leukemia viral oncogene homolog 1	P04049	pS259

References:

1) Schoenherr RM, Huang D, Voytovich UJ, Ivey RG, Kennedy JJ, Saul RG, Colantonio S, Roberts RR, Knotts JG, Kaczmarczyk JA, Perry C, Hewitt SM, Bocik W, Whiteley GR, Hiltke T, Boja ES, Rodriguez H, Whiteaker JR, Paulovich AG. A dataset describing a suite of novel antibody reagents for the RAS signaling network. Scientific Data (2019) 6 (1):160. doi: 10. 1038/s41597-019-0166-7. PMID:31467290

2) Whiteaker JR, Sharma K, Hoffman MA, Kuhn E, Zhao L, Cocco AR, Schoenherr RM, Kennedy JJ, Voytovich U, Lin C, Fang B, Bowers K, Whiteley G, Colantonio S, Bocik W, Roberts R, Hiltke T, Boja E, Rodriguez H, McCormick F, Holderfield M, Carr SA, Koomen JM, Paulovich AG. Targeted mass spectrometry-based assays enable multiplex quantification of receptor tyrosine kinase, MAP Kinase, and AKT signaling. Cell Reports Methods (2021) 1(3):1-12. 100015 doi.org/10.1016/j.crmeth.2021.100015. PMID:34671754