

RAS/MAPK panel 2

oM = oxidized Met,
p = phospho (47 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	nonmod
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
ARAF	Serine/threonine-protein kinase A-Raf	P10398	nonmod
ARAF	Serine/threonine-protein kinase A-Raf	P10398	nonmod
ARAF	Serine/threonine-protein kinase A-Raf	P10398	nonmod
BRAF	v-raf murine sarcoma viral oncogene homolog B1	P15056	nonmod
CCND1	cyclin D1	P24385	nonmod
CCND1	cyclin D1	P24385	nonmod
CCND1	cyclin D1	P24385	nonmod
CCND1	cyclin D1	P24385	nonmod
CCND1	cyclin D1	P24385	nonmod
CDH1	cadherin 1	P12830	nonmod
CDH1	cadherin 1	P12830	nonmod
CDH2	cadherin 2, type 1, N-cadherin (neuronal)	P19022	nonmod
CDH2	cadherin 2, type 1, N-cadherin (neuronal)	P19022	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	nonmod
ERBB2	v-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)	P04626	nonmod
ERBB3	v-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avian)	P21860	nonmod
ERBB3	v-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avian)	P21860	nonmod
ERBB3	v-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avian)	P21860	nonmod
FOS	v-fos FBJ murine osteosarcoma viral oncogene homolog	P01100	nonmod
FOS	v-fos FBJ murine osteosarcoma viral oncogene homolog	P01100	nonmod
FOS	v-fos FBJ murine osteosarcoma viral oncogene homolog	P01100	nonmod
GAPDH	Glyceraldehyde-3-phosphate dehydrogenase	P04406	nonmod
GSK3B	Glycogen synthase kinase-3 beta	P49841	nonmod
GSK3B	Glycogen synthase kinase-3 beta	P49841	nonmod
GSK3B	Glycogen synthase kinase-3 beta	P49841	nonmod
MAP2K1	mitogen-activated protein kinase kinase 1	Q02750	nonmod
MAPK3	mitogen-activated protein kinase 3	P27361	nonmod
MTOR	mechanistic target of rapamycin (serine/threonine kinase)	P42345	nonmod
MTOR	mechanistic target of rapamycin (serine/threonine kinase)	P42345	nonmod
MTOR	mechanistic target of rapamycin (serine/threonine kinase)	P42345	nonmod
MTOR	mechanistic target of rapamycin (serine/threonine kinase)	P42345	nonmod
MTOR	mechanistic target of rapamycin (serine/threonine kinase)	P42345	nonmod
PTEN	Phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN	P60484	nonmod
PTEN	phosphatase and tensin homolog (mutated in multiple advanced cancers 1)	P60484	nonmod
PTEN	phosphatase and tensin homolog (mutated in multiple advanced cancers 1)	P60484	nonmod
PTEN	Phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN	P60484	nonmod
RAF1	v-raf-1 murine leukemia viral oncogene homolog 1	P04049	nonmod
RAF1	v-raf-1 murine leukemia viral oncogene homolog 1	P04049	nonmod
RAF1	v-raf-1 murine leukemia viral oncogene homolog 1	P04049	nonmod
RPTOR	regulatory associated protein of MTOR, complex 1	Q8N122	nonmod
RPTOR	regulatory associated protein of MTOR, complex 1	Q8N122	nonmod

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