

#72908 Store at -20C

PEAK1 (D4G6J) Rabbit mAb



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H	Endogenous	250	Rabbit IgG	#Q9H792	79834

Product Usage Information	Application Western Blotting	Dilution 1:1000
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	PEAK1 (D4G6J) Rabbit mAb recognizes endogenous levels of total PEAK1 protein.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Thr695 of human PEAK1 protein.	
Background	PEAK1 (Pseudopodium-enriched atypical kinase 1 or sgk269) is a member of nonreceptor atypical tyrosine kinase family identified by MS analysis of purified pseudopodium (1). PEAK1 is a multi-domain protein with a N-terminal Erk binding site, followed by actin-targeting/Src substrate/Erk substrate region, Crk binding site, Shc binding site, and a C-terminal kinase domain (1, 2). By interacting with different adaptors like Shc, Grb2, Src, and others, PEAK1 functions as an important regulator in different signaling pathways, namely the Src/PEAK1/Erbb2 (3), EGFR Shc1/PEAK1/Grb2(4), TGFβ/PEAK1/Src/MAPK (5), and fibronectin/PEAK1/Src (6) pathways. PEAK1 plays an instrumental role in a wide variety of biological processes including epithelial-mesenchymal transition (EMT), dynamics of focal adhesion, cancer metastatic growth and invasion as well as cancer drug resistance (3, 5-8). Phosphorylation of PEAK1 at Tyr665 or Tyr635 by SFK (Src family Kinases) has been shown to be essential for cancer cell migration and invasion as well as the turnover of focal adhesions (7, 9).	
Background References	<ol style="list-style-type: none"> 1. Wang, Y. et al. (2010) <i>Proc Natl Acad Sci U S A</i> 107, 10920-5. 2. Kelber, J.A. and Klemke, R.L. (2010) <i>Oncotarget</i> 1, 219-23. 3. Kelber, J.A. et al. (2012) <i>Cancer Res</i> 72, 2554-64. 4. Zheng, Y. et al. (2013) <i>Nature</i> 499, 166-71. 5. Agajanian, M. et al. (2015) <i>PLoS One</i> 10, e0135748. 6. Agajanian, M. et al. (2015) <i>Biochem Biophys Res Commun</i> 465, 606-12. 7. Bristow, J.M. et al. (2013) <i>J Biol Chem</i> 288, 123-31. 8. Fujimura, K. et al. (2014) <i>Cancer Res</i> 74, 6671-81. 9. Croucher, D.R. et al. (2013) <i>Cancer Res</i> 73, 1969-80. 	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	WB: Western Blotting
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected
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