

PEAK1 (D4G6J) Rabbit mAb

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For Research Use Only. Not for Use in Diagnostic Procedures.

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

1. Wang, Y. et al. (2010) *Proc Natl Acad Sci U S A* 107, 10920-5.
2. Kelber, J.A. and Klemke, R.L. (2010) *Oncotarget* 1, 219-23.
3. Kelber, J.A. et al. (2012) *Cancer Res* 72, 2554-64.
4. Zheng, Y. et al. (2013) *Nature* 499, 166-71.
5. Agajanian, M. et al. (2015) *PLoS One* 10, e0135748.
6. Agajanian, M. et al. (2015) *Biochem Biophys Res Commun* 465, 606-12.
7. Bristow, J.M. et al. (2013) *J Biol Chem* 288, 123-31.
8. Fujimura, K. et al. (2014) *Cancer Res* 74, 6671-81.
9. Croucher, D.R. et al. (2013) *Cancer Res* 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

W: Western Blotting

Cross-Reactivity Key

H: Human

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