

Resource Summary Report

Generated by [RRID](#) on Aug 31, 2026

pCMV6M-PAK1 T423E

RRID:Addgene_12208

Type: Plasmid

Proper Citation

RRID:Addgene_12208

Plasmid Information

URL: <http://www.addgene.org/12208>

Proper Citation: RRID:Addgene_12208

Insert Name: Pak1

Organism: Homo sapiens

Bacterial Resistance: Ampicillin

Defining Citation: [PMID:9395435](#)

Vector Backbone Description: Backbone Size:4900; Vector Backbone:pCMV6; Vector Types:Mammalian Expression; Bacterial Resistance:Ampicillin

Comments: There is also an additional mutation in this plasmid - L516I. The L516I mutation, or SNP, has been present from the very beginning (~1995). The crystal structure of Pak1 uses this clone, so it is present there too. The depositor does not think it affects function in any way. Pak1 may contain a G401S mutation. Depositor states that this mutation should not affect plasmid function.

Plasmid Name: pCMV6M-PAK1 T423E

Relevant Mutation: Activated Pak1: T423E

Record Creation Time: 20220422T221639+0000

Record Last Update: 20260829T075329+0000

Ratings and Alerts

No rating or validation information has been found for pCMV6M-PAK1 T423E.

No alerts have been found for pCMV6M-PAK1 T423E.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 18 mentions in open access literature.

Listed below are recent publications. The full list is available at [RRID](#) .

Wang Y, et al. (2025) PAK1 regulates oligodendroglial proliferation and repopulation in homeostatic and demyelinating brain. Cellular and molecular life sciences : CMLS, 82(1), 260.

Murugan S, et al. (2025) Pak1 dysregulates pyruvate metabolism in PDAC cells by exerting a phosphorylation-mediated regulatory effect on PDHA1. The Journal of biological chemistry, 301(4), 108409.

Wang Y, et al. (2024) Control of OPC proliferation and repopulation by the intellectual disability gene PAK1 under homeostatic and demyelinating conditions. bioRxiv : the preprint server for biology.

Vargas B, et al. (2023) Mechanism by Which PF-3758309, a Pan Isoform Inhibitor of p21-Activated Kinases, Blocks Reactivation of HIV-1 Latency. Biomolecules, 13(1).

Misra S, et al. (2021) Periostin/Filamin-A: A Candidate Central Regulatory Axis for Valve Fibrogenesis and Matrix Compaction. Frontiers in cell and developmental biology, 9, 649862.

Ostrowska-Podhorodecka Z, et al. (2021) Vimentin tunes cell migration on collagen by controlling $\alpha1$ integrin activation and clustering. Journal of cell science, 134(6).

Brown TL, et al. (2021) PAK1 Positively Regulates Oligodendrocyte Morphology and Myelination. The Journal of neuroscience : the official journal of the Society for Neuroscience, 41(9), 1864.

Feng X, et al. (2021) Hypoxia-induced acetylation of PAK1 enhances autophagy and promotes brain tumorigenesis via phosphorylating ATG5. Autophagy, 17(3), 723.

Davidson A, et al. (2021) A kinase-independent function of PAK is crucial for pathogen-mediated actin remodelling. PLoS pathogens, 17(8), e1009902.

Huang N, et al. (2021) Reprogramming an energetic AKT-PAK5 axis boosts axon energy supply and facilitates neuron survival and regeneration after injury and ischemia. Current biology : CB, 31(14), 3098.

Ghatak S, et al. (2019) Periostin/ $\alpha1$ integrin interaction regulates p21-activated kinases in valvular interstitial cell survival and in actin cytoskeleton reorganization. Biochimica et biophysica acta. General subjects, 1863(5), 813.

Hodakoski C, et al. (2019) Rac-Mediated Macropinocytosis of Extracellular Protein Promotes Glucose Independence in Non-Small Cell Lung Cancer. *Cancers*, 11(1).

Chang JK, et al. (2017) Protein kinase D1 (PKD1) phosphorylation on Ser203 by type I p21-activated kinase (PAK) regulates PKD1 localization. *The Journal of biological chemistry*, 292(23), 9523.

Babagana M, et al. (2017) P21-activated kinase 1 regulates resistance to BRAF inhibition in human cancer cells. *Molecular carcinogenesis*, 56(5), 1515.

Sabra H, et al. (2017) α 1 integrin-dependent Rac/group I PAK signaling mediates YAP activation of Yes-associated protein 1 (YAP1) via NF2/merlin. *The Journal of biological chemistry*, 292(47), 19179.

Okada T, et al. (2016) Integrin- α 10 Dependency Identifies RAC and RICTOR as Therapeutic Targets in High-Grade Myxofibrosarcoma. *Cancer discovery*, 6(10), 1148.

Pinto VI, et al. (2015) PAK1 is involved in sensing the orientation of collagen stiffness gradients in mouse fibroblasts. *Biochimica et biophysica acta*, 1853(10 Pt A), 2526.

Pham H, et al. (2008) COX-2 promoter activation by AT1R-Gq-PAK-p38 β signaling in intestinal epithelial cells. *Biochimica et biophysica acta*, 1779(6-7), 408.