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PAK5 (h2): 293T Lysate: sc-173746

BACKGROUND

The p21-activated kinase (PAK) family of protein kinases are serine/threonine protein kinases that bind to and, in some cases, are stimulated by activated forms of the small GTPases, Cdc42 and Rac. PAK5, a member of the PAK family of protein kinases contains a CDC42/Rac1 interactive binding (CRIB) motif at the N-terminus and a Ste20-like kinase domain at the C-terminus. PAK5 preferentially binds to CDC42 in the presence of GTP and the CRIB motif is essential for this interaction. PAK5 operates downstream of Cdc42 and Rac and antagonizes Rho in the pathway, leading to neurite development. PAK5 is a functional protein kinase, but, unlike PAK-I family kinases (PAK1, 2, and 3), the kinase activity of PAK5 does not seem to require the binding of CDC42. PAK5 is highly expressed in mammalian brain but is not expressed in most other tissues. PAK5 colocalizes and binds to both the actin and MT networks and its subcellular localization is regulated during cell cycle progression.

REFERENCES

1. Cau, J., Faure, S., Comps, M., Delsert, C. and Morin, N. 2001. A novel p21-activated kinase binds the actin and microtubule networks and induces microtubule stabilization. *J. Cell Biol.* 155: 1029-1042.
2. Pandey, A., Dan, I., Kristiansen, T.Z., Watanabe, N.M., Voldby, J., Kajikawa, E., Khosravi-Far, R., Blagoev, B. and Mann, M. 2002. Cloning and characterization of PAK5, a novel member of mammalian p21-activated kinase-II subfamily that is predominantly expressed in brain. *Oncogene* 21: 3939-3948.
3. Dan, C., Nath, N., Liberto, M. and Minden, A. 2002. PAK5, a new brain-specific kinase, promotes neurite outgrowth in N1E-115 cells. *Mol. Cell Biol.* 22: 567-577.
4. Jaffer, Z.M. and Chernoff, J. 2002. p21-Activated kinases: three more join the Pak. *Int. J. Biochem. Cell Biol.* 34: 713-717.
5. SWISS-PROT/TrEMBL (12585290). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>.

CHROMOSOMAL LOCATION

Genetic locus: PAK7 (human) mapping to 20p12.2.

PRODUCT

PAK5 (h2): 293T Lysate represents a lysate of human PAK5 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

PAK5 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive PAK5 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.