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#4750

PAK 1/2/3 Antibody Sampler Kit

1 Kit (8 x 20 microliters)

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

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Phospho-PAK1 (Ser144)/PAK2 (Ser141) Antibody	2606	20 µl	61 to 67 (PAK2), 68 to 74 (PAK1/3) kDa	Rabbit
Phospho-PAK1 (Ser199/204)/PAK2 (Ser192/197) Antibody	2605	20 µl	61 to 67 (PAK2), 68 to 74 (PAK1/3) kDa	Rabbit
Phospho-PAK1 (Thr423)/PAK2 (Thr402) Antibody	2601	20 µl	61 to 67 (PAK2), 68 to 74 (PAK1/3) kDa	Rabbit
Phospho-PAK2 (Ser20) Antibody	2607	20 µl	61 to 67 kDa	Rabbit
PAK1 Antibody	2602	20 µl	68 kDa	Rabbit
PAK2 Antibody	2608	20 µl	61 kDa	Rabbit
PAK3 Antibody	2609	20 µl	65 kDa	Rabbit
PAK1/2/3 Antibody	2604	20 µl	61 (PAK2), 68 (PAK1/3) kDa	Rabbit
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The PAK antibody sampler kit provides an economical means to evaluate the activation status of PAK1, 2, and 3. This kit includes enough primary and secondary antibodies to perform two western blots with each antibody.

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Background

The p21-activated kinase (PAK) family of serine/threonine kinases is engaged in multiple cellular processes, including cytoskeletal reorganization, MAPK signaling, apoptotic signaling, control of phagocyte NADPH oxidase and growth factor-induced neurite outgrowth (1,2). Several mechanisms that induce PAK activity have been reported. Binding of Rac/cdc42 to the CRIB (or PBD) domain near the amino terminus of PAK causes autophosphorylation and conformational changes in PAK (1). Phosphorylation of PAK1 at Thr423 by PDK induces activation of PAK1 (3). Several autophosphorylation sites have been identified, including serines 199 and 204 of PAK1 and serines 192 and 197 of PAK2 (4,5). Because the autophosphorylation sites are located in the amino-terminal inhibitory domain, it has been hypothesized that modification in this region prevents the kinase from reverting to an inactive conformation (6). Research indicates that phosphorylation of Ser144 of PAK1 or Ser139 of PAK3 (located in the kinase inhibitory domain) affects kinase activity (7). Phosphorylation of Ser21 of PAK1 or Ser20 of PAK2 regulates binding with the adaptor protein Nck (8).

Background References

1. Knaus, U.G. and Bokoch, G.M. (1998) *Int J Biochem Cell Biol* 30, 857-62.
2. Daniels, R.H. et al. (1998) *EMBO J* 17, 754-64.
3. King, C.C. et al. (2000) *J Biol Chem* 275, 41201-9.
4. Manser, E. et al. (1997) *Mol Cell Biol* 17, 1129-43.
5. Gatti, A. et al. (1999) *J Biol Chem* 274, 8022-8.
6. Lei, M. et al. (2000) *Cell* 102, 387-97.
7. Chong, C. et al. (2001) *J Biol Chem* 276, 17347-53.
8. Zhao, Z.S. et al. (2000) *Mol Cell Biol* 20, 3906-17.

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