

**EpiSelect PAK Sampler Kit
Product Data Sheet**

Catalog # 5007-1

Lot #: Please refer to the vial
Quantity: 40 µl per vial x 4 vials

Description: A sample kit with rabbit monoclonal (RabMAbs™) and polyclonal specific to four PAK isoforms (PAK1, PAK2, PAK3, PAK4). Each kit is provided with sufficient amount of PAK antibodies for various immunoassays.

Background:

p21-activated kinases (PAKs) are serine/threonine kinases which functions as downstream nodes for various oncogenic signaling pathways. Well-known regulators of cytoskeletal remodeling and cell motility, PAKs have recently also have been shown to promote cell proliferation, regulate apoptosis, and accelerate mitotic abnormalities leading to tumor formation and cell invasiveness (1).

The PAK proteins can be essentially divided into two categories, groups I (PAK1, PAK2 and PAK3) and group II (PAK4, PAK5 and PAK6), based on their structures. PAK1 participates in regulating the actin cytoskeleton, focal adhesion contacts, cell motility, apoptosis and transcription. It also promotes the disassembly of stress fibers (2). The ubiquitous PAK2 is unique among the PAK isoforms because it is also activated through proteolytic cleavage by caspases or caspase-like proteases. Highly expressed in the nervous system and particularly in the hippocampus along with PAK1, PAK3's function still remains unclear. Mutations of PAK3 have been linked to nonsyndromic X-linked mental retardation (3). PAK4 has been shown to regulate cytoskeletal organization and to protect cells from apoptosis induced by multiple stimuli, including serum withdrawal, tumor necrosis factor- (TNF) treatment, or UV irradiation (4). PAK4 expression is elevated in many cancer cell lines, and activated PAK4 is highly transforming, suggesting an important role in tumorigenesis (5).

Antibody Descriptions:

Antibody	Clone ID	MW (kDa)	Species	Recommended Positive Control	Application - Usage Guideline				
					WB	IHC	ICC	IP	FC
PAK-1	EP656Y	66	Hu, Ms, Rt	HeLa	1:100-500	1:100-250	1:50-100	1:50	1:10
PAK-2	Polyclonal	61	Hu, Ms, Rt	HeLa	1:1000-10,000	1:250-500	1:100-250	N/A	1:20
PAK-3	EP797Y	65	Hu, Ms, Rt	Human Brain	1:10,000-50,000	1:100-250	1:100-250	1:50	N/A
PAK-4	Polyclonal	68	Hu, Ms, Rt	SH-SY-5Y	1:500-1000	N/A	N/A	N/A	N/A

Note – Hu (Human), Ms (Mouse), Rt (Rat); RTU (Ready to Use), ND (Not Determined), NA (Not Applicable)

Please visit www.epitomics.com for recommended protocols

Recommended Products:

Item Name	Amount	Cat#
Anti-Rabbit IgG, HRP conjugate	1 ml	3050-1
Positive Control Cell Lysate	100ug	Various – contact Epitomics for details

Storage Conditions:

Store at -20 °C. Buffer: PBS with 200 mg/ml BSA, 40 % glycerol and 0.02% NaN3.
Stable for 12 months from date of receipt.

Recommended Assay Condition and Protocols:

For recommended protocol and condition, please refer to "tech" section at www.epitomics.com

References:

1. Manser E et al. *Nature* 363, 364–367, 1994.
2. Daniels RH and Bokoch GH, *Trends Biochem. Sci.* 24:350–355, 1999.
3. Allen et al. *Nature Genet.* 20: 25-30, 1998
4. Gnesutta N et al. *J. Biol. Chem.* 276, 14414-14419, 2004.
5. Qu J et al. *Mol. Cell. Biol.* 21, 3523-3533, 2001.

For research use only. Not for use in diagnostic or therapeutic applications.

This product was manufactured under U.S. Patent No. 5,675,063. For a complete list of protocols and available related products, please visit www.epitomics.com.

Sample Test Results:

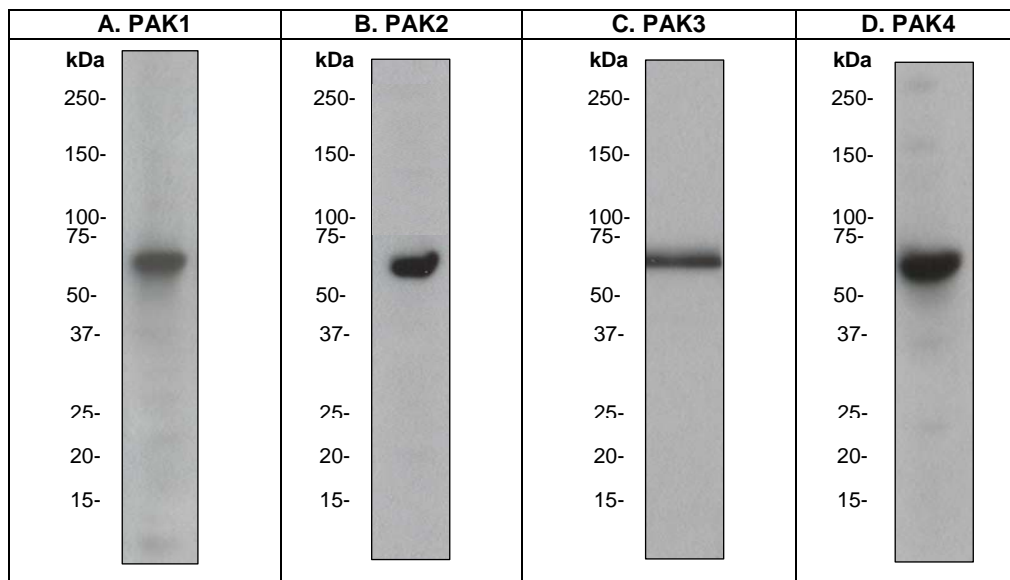
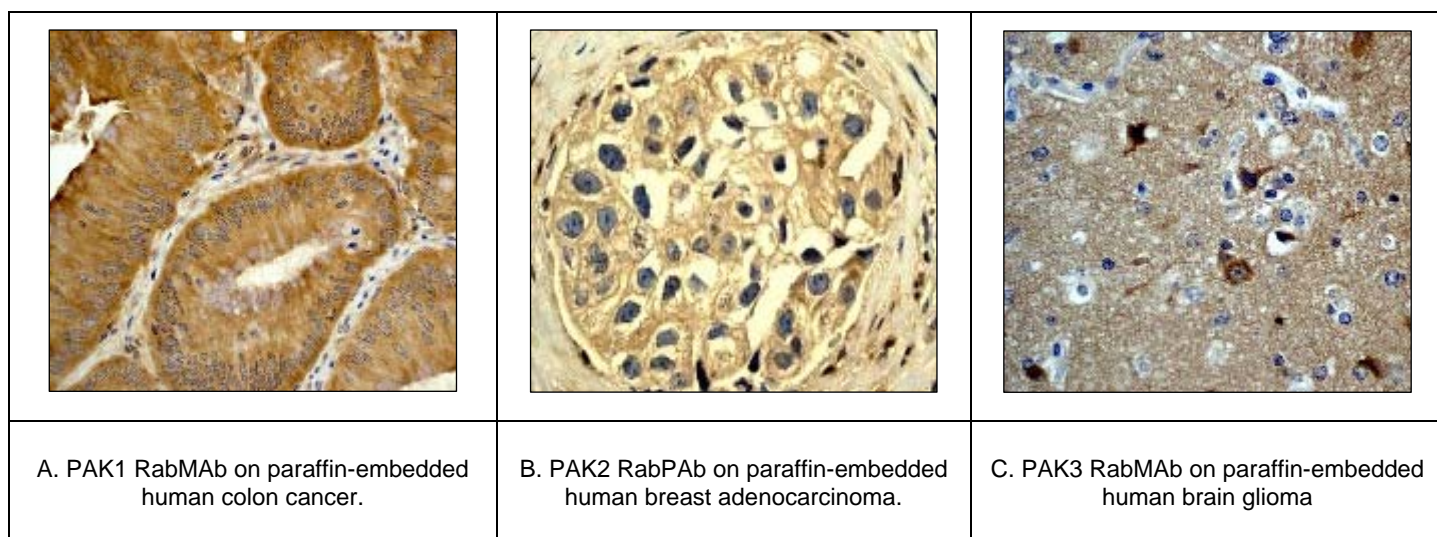


Figure 1 - Western blot analysis of A) PAK1 on HeLa cell lysate, B) PAK2 on HeLa cell lysate, C) PAK3 on Fetal Brain tissue lysate, D) PAK4 on SH-SY-5Y cell lysate. Recommended Western Blotting condition and protocol were used. For recommended protocol and condition, please refer to www.epitomics.com

Figure 2 - Immunohistochemical analysis of PAK antibodies on various human tissues. Recommended Western Blotting condition and protocol were used. For recommended protocol and condition, please refer to www.epitomics.com



Related Products:

Antigen	Clone	Catalog
PAK1	EP656Y	1705-1
PAK1 (N-term)	EP795Y	1734-1
PAK1 (pS20)	EP655Y	1990-1
PAK2 (N-term)	Polyclonal	1721-1
PAK3 (N-term)	EP797Y	1717-1
PAK4 (N-term)	Polyclonal	1725-1

Product QC'd by: _____

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