Datasheet for ABIN7180063

anti-PAK1 antibody (Ser204)

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Overview

Quantity:	100 µL
Target:	PAK1
Binding Specificity:	Ser204
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This PAK1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), ELISA

Product Details

Immunogen:	Synthesized non-phosphopeptide derived from Human PAK1 around the phosphorylation site of serine 204 (T-R-S(p)-V-I).
Isotype:	IgG
Cross-Reactivity:	Human, Mouse
Purification:	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

Target Details

Target:	PAK1
Alternative Name:	PAK1 (PAK1 Products)

Target Details

Background:	Background: Protein kinase involved in intracellular signaling pathways downstream of integrins and receptor-type kinases that plays an important role in cytoskeleton dynamics, in cell adhesion, migration, proliferation, apoptosis, mitosis, and in vesicle-mediated transport processes. Can directly phosphorylate BAD and protects cells against apoptosis. Activated by interaction with CDC42 and RAC1. Functions as GTPase effector that links the Rho-related GTPases CDC42 and RAC1 to the JNK MAP kinase pathway. Phosphorylates and activates MAP2K1, and thereby mediates activation of downstream MAP kinases. Involved in the reorganization of the actin cytoskeleton, actin stress fibers and of focal adhesion complexes. Phosphorylates the tubulin chaperone TBCB and thereby plays a role in the regulation of microtubule biogenesis and organization of the tubulin cytoskeleton. Plays a role in the regulation of insulin secretion in response to elevated glucose levels. Part of a ternary complex that contains PAK1, DVL1 and MUSK that is important for MUSK-dependent regulation of AChR clustering during the formation of the neuromuscular junction (NMJ). Activity is inhibited in cells undergoing apoptosis, potentially due to binding of CDC2L1 and CDC2L2. Phosphorylates MYL9/MLC2. Phosphorylates RAF1 at 'Ser-338' and 'Ser-339' resulting in: activation of RAF1, stimulation of RAF1 translocation to mitochondria, phosphorylation of BAD by RAF1, and RAF1 binding to BCL2. Phosphorylates SNAI1 at 'Ser-246' promoting its transcriptional repressor activity by increasing its accumulation in the nucleus. In podocytes, promotes NR3C2 nuclear localization. Required for atypical chemokine receptor ACKR2-induced phosphorylation of LIMK1 and cofilin (CFL1) and for the up-regulation of ACKR2 from endosomal compartment to cell membrane, increasing its efficiency in chemokine uptake and degradation. In synapses, seems to mediate the regulation of F-actin cluster formation performed by SHANK3, maybe through CFL1 phosphorylation and inactivation. Brown J.L.,Curr. Biol. 6:598-605(1996). Sells M.A.,Curr. Biol. 7:202-210(1997). The MGC Project Team,Genome Res. 14:2121-2127(2004). Aliases: ADRB2 antibody, Alpha PAK antibody, Alpha-PAK antibody, MGC130000 antibody, MGC130001 antibody, p21 activated kinase 1 antibody, p21 protein (Cdc42/Rac) activated kinase 1 antibody, p21-activated kinase 1 antibody, p21/Cdc42/Rac1 activated kinase 1 (yeast Ste20 related) antibody, p21/Cdc42/Rac1-activated kinase 1 (STE20 homolog, yeast) antibody, p65 PAK antibody, p65-PAK antibody, P68-PAK antibody, PAK alpha antibody, PAK-1 antibody, Pak1 antibody, PAK1_HUMAN antibody, Paka antibody, PAKalpha antibody, Protein kinase MUK2 antibody, Rac/p21-activated kinase antibody, Serine/threonine-protein kinase PAK 1 antibody, STE20 homolog yeast antibody

Target Details

UniProt:	Q13153
Pathways:	MAPK Signaling, RTK Signaling, TCR Signaling, Fc-epsilon Receptor Signaling Pathway, Intracellular Steroid Hormone Receptor Signaling Pathway, Regulation of Intracellular Steroid Hormone Receptor Signaling, Skeletal Muscle Fiber Development, CXCR4-mediated Signaling Events, Signaling Events mediated by VEGFR1 and VEGFR2, Signaling of Hepatocyte Growth Factor Receptor, Embryonic Body Morphogenesis

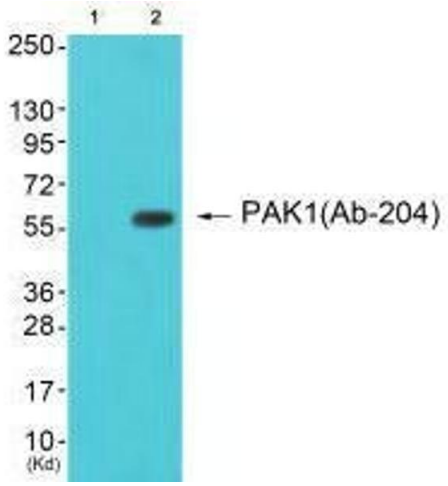
Application Details

Application Notes:	WB:1:500-1:3000, IHC:1:50-1:100,
Restrictions:	For Research Use only

Handling

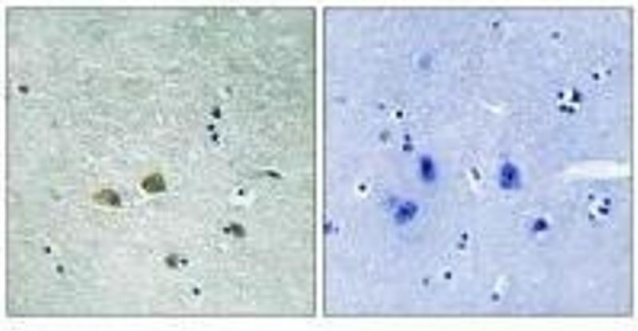
Format:	Liquid
Buffer:	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150 mM NaCl, 0.02 % sodium azide and 50 % glycerol.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C,-80 °C
Storage Comment:	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.

Images



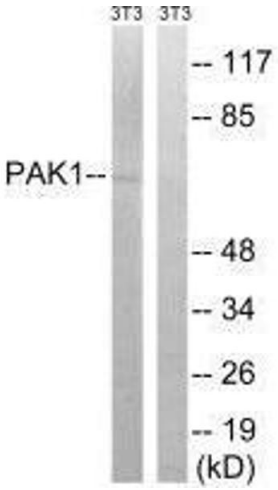
Western Blotting

Image 1. Western blot analysis of extracts from cos-7 cells (Lane 2), using PAK1 (Ab-204) antiobdy. The lane on the left is treated with synthesized peptide.



Immunohistochemistry

Image 2. Immunohistochemistry analysis of paraffin-embedded human brain tissue using PAK1 (Ab-204) antibody.



Western Blotting

Image 3. Western blot analysis of extracts from 3T3 cells, treated with UV (15 mins), using PAK1 (Ab-204) antibody.