

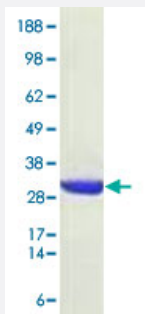
Bioactive

## PAK4 (Human) Recombinant Protein

Catalog # P5384

Size 10 ug

### Applications



### Result of activity analysis

#### Result of activity analysis

Analysis of enzymatic activity was performed according to the Zlyte assay protocol (Invitrogen):

1. Different concentrations of PAK4 were incubated in a buffer containing 50 mM HEPES pH 7.5, 10 mM MgCl<sub>2</sub>, 1 mM EGTA, 200 uM ATP, 0.01% Brij-35, and 2 uM substrate (SER/THR 14, Invitrogen) at RT for 1 hour.
2. Developer solution was added to the reaction and the reaction was stopped after 1 hour of incubation at RT.
3. Fluorescence was then detected using  $\lambda_{exc}=460\pm40$  nm and  $\lambda_{em}=528\pm20$  nm filters.

### Specification

#### Product Description

Human PAK4 kinase domain (O96013, 300 a.a. - 591 a.a.) partial recombinant protein expressed in *Escherichia coli*.

Sequence	<p><b>GPHM</b>SHEQFRAALQLVVDPGDPRSYLDNFIKIGEGSTGIVCIATVRSSGKLVAVKKMDLRKQQRRELLFNEVVIMRDYQHENVVEMYNSYLVGDELWVMEFLEGGALTDIVTHTRMNEEQIAAVCLAVLQALSVLHAQGVHRDIKSDSILLTHDGRVKLSDFGFCQVSKEVP RRK<u>S</u>LVGTPYWMAPELISRLPYGPEVDWVSLGIMVIEMVDGEPPYFNEPPLKAMKMIRDNLPPRLKNLHKVSPSLKGFDRLLVRDPAQRATAAELLKHPFLAKAGPPASIVPLMRQNRT</p> <p>The first 4 residues <b>GPHM</b> are from Turbo3C Protease cleavage site. The underlined <b>S</b> is phosphorylated S474.</p>
Host	Escherichia coli
Theoretical MW (kDa)	33.3
Form	Liquid
Preparation Method	<i>Escherichia coli</i> expression system
Concentration	1 mg/ml
Activity	Specific activity: 5,595 pmoles/min/ug
Quality Control Testing	Loading 7 ug protein in SDS-PAGE
Storage Buffer	In 25 mM Tris-HCl pH 8.0, 150 mM NaCl, 10% glycerol, 5 mM DTT.
Storage Instruction	Store at -80°C. Aliquot to avoid repeated freezing and thawing.
Note	<p>Result of activity analysis</p> <p>Result of activity analysis</p> <p>Analysis of enzymatic activity was performed according to the Zlyte assay protocol (Invitrogen):</p> <ol style="list-style-type: none"> <li>1. Different concentrations of PAK4 were incubated in a buffer containing 50 mM HEPES pH 7.5, 10 mM MgCl<sub>2</sub>, 1 mM EGTA, 200 uM ATP, 0.01% Brij-35, and 2 uM substrate (SER/THR 14, Invitrogen) at RT for 1 hour.</li> <li>2. Developer solution was added to the reaction and the reaction was stopped after 1 hour of incubation at RT.</li> <li>3. Fluorescence was then detected using <math>\lambda_{exc}=460\pm40</math> nm and <math>\lambda_{em}=528\pm20</math> nm filters.</li> </ol>

## Applications

- Functional Study
- SDS-PAGE

## Gene Info — PAK4

Entrez GeneID [10298](#)

Protein Accession#	<a href="#">O96013</a>
Gene Name	PAK4
Gene Alias	-
Gene Description	p21 protein (Cdc42/Rac)-activated kinase 4
Omim ID	<a href="#">605451</a>
Gene Ontology	<a href="#">Hyperlink</a>
Gene Summary	<p>PAK proteins, a family of serine/threonine p21-activating kinases, include PAK1, PAK2, PAK3 and PAK4. PAK proteins are critical effectors that link Rho GTPases to cytoskeleton reorganization and nuclear signaling. They serve as targets for the small GTP binding proteins Cdc42 and Rac and have been implicated in a wide range of biological activities. PAK4 interacts specifically with the GTP-bound form of Cdc42Hs and weakly activates the JNK family of MAP kinases. PAK4 is a mediator of filopodia formation and may play a role in the reorganization of the actin cytoskeleton. Multiple alternatively spliced transcript variants encoding distinct isoforms have been found for this gene. [provided by RefSeq]</p>
Other Designations	p21(CDKN1A)-activated kinase 4 p21-activated kinase 4 protein kinase related to S. cerevisiae STE20, effector for Cdc42Hs

## Pathway

- [Axon guidance](#)
- [ErbB signaling pathway](#)
- [Focal adhesion](#)
- [Regulation of actin cytoskeleton](#)
- [Renal cell carcinoma](#)
- [T cell receptor signaling pathway](#)

## Disease

- [Genetic Predisposition to Disease](#)
- [Parkinson disease](#)