abcam

Product datasheet

Mouse FAK (phospho Y397) peptide ab40145

1 Abreviews 2 References 2 Images

Description

Product name	Mouse FAK (phospho Y397) peptide
Animal free	No
Nature	Synthetic
Species	Mouse

Specifications

Our Abpromise guarantee covers the use of **ab40145** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Blocking
Form	Liquid
Additional notes	*- First try to dissolve a small amount of peptide in either water or buffer. The more charged residues on a peptide, the more soluble it is in aqueous solutions.* *- If the peptide doesn't dissolve try an organic solvent e.g. DMSO, then dilute using water or buffer.* *- Consider that any solvent used must be compatible with your assay. If a peptide does not dissolve and you need to recover it, lyophilise to remove the solvent.* *- Gentle warming and sonication can effectively aid peptide solubilisation. If the solution is cloudy or has gelled the peptide may be in suspension rather than solubilised.* *- Peptides containing cysteine are easily oxidised, so should be prepared in solution just prior to use.*

Preparation and Storage

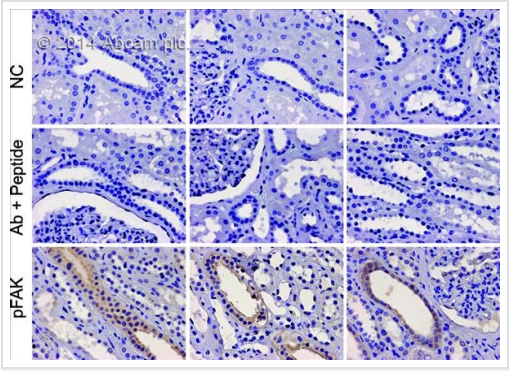
Stability and Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles. Information available upon request.

General Info

Function	Non-receptor protein-tyrosine kinase implicated in signaling pathways involved in cell motility,

	proliferation and apoptosis. Activated by tyrosine-phosphorylation in response to either integrin clustering induced by cell adhesion or antibody cross-linking, or via G-protein coupled receptor (GPCR) occupancy by ligands such as bombesin or lysophosphatidic acid, or via LDL receptor occupancy. Microtubule-induced dephosphorylation at Tyr-397 is crucial for the induction of focal adhesion disassembly. Plays a potential role in oncogenic transformations resulting in increased kinase activity.
Tissue specificity	Expressed in all organs tested, in lymphoid cell lines, but most abundantly in brain.
Sequence similarities	Belongs to the protein kinase superfamily. Tyr protein kinase family. FAK subfamily. Contains 1 FERM domain. Contains 1 protein kinase domain.
Domain	The first Pro-rich domain interacts with the SH3 domain of CRK-associated substrate (BCAR1) and CASL. The carboxy-terminal region is the site of focal adhesion targeting (FAT) sequence which mediates the localization of FAK1 to focal adhesions.
Post-translational modifications	Phosphorylated on 6 tyrosine residues upon activation. Microtubule-induced dephosphorylation at Tyr-397 could be catalyzed by PTPN11 and regulated by ZFYVE21. Dephosphorylated by PTPN11 upon EPHA2 activation by its ligand EFNA1.
Cellular localization	Cell junction > focal adhesion. Cell membrane. Constituent of focal adhesions.

Images

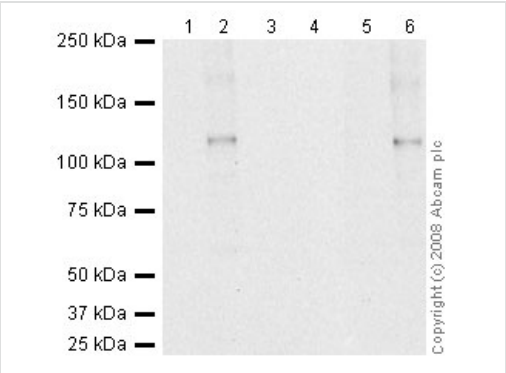


Blocking - Mouse FAK (phospho Y397) peptide (ab40145)

This image is courtesy of an anonymous Abreview

To demonstrate the specificity of the phosphorylation site specific antibody (ab4803) a 1/150 dilution of anti human-FAK (phospho Y397) antibody was pre-incubated with 200 fold molar excess of peptide (ab40145, 1/15 dilution) for 12 hours rolling at 4°C.

Human Tissue sections (kidney) were deparaffinized, rehydrated and antigen retrieval was performed using citrate buffer pH 6.0. Endogenous peroxidase was quenched using 3% hydrogenperoxide in methanol and blocking was performed. Primary antibody alone (positive control) or mixed with peptide (blocking control) or antibody diluent alone (negative control) was applied to tissue sections and incubated for 16 hours at 4°C. Detection was performed using a HRP detection system. Nuclei were counterstained using Hematoxylin.



Western blot - Mouse FAK (phospho Y397) peptide (ab40145)

All lanes : Anti-FAK (phospho Y397) antibody (ab39967) at 1 µg/ml

Lane 1 : NIH 3T3 (Mouse embryonic fibroblast cell line) Whole Cell Lysate
Lane 2 : NIH 3T3 treated with Vanadate and PDGF Whole Cell Lysate
Lane 3 : NIH 3T3 (Mouse embryonic fibroblast cell line) Whole Cell Lysate with Mouse FAK (phospho Y397) peptide (ab40145) at 1 µg/ml
Lane 4 : NIH 3T3 treated with Vanadate and PDGF Whole Cell Lysate with Mouse FAK (phospho Y397) peptide (ab40145) at 1 µg/ml
Lane 5 : NIH 3T3 (Mouse embryonic fibroblast cell line) Whole Cell Lysate with Mouse FAK peptide (ab53601) at 1 µg/ml
Lane 6 : NIH 3T3 treated with Vanadate and PDGF Whole Cell Lysate with Mouse FAK peptide (ab53601) at 1 µg/ml

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Performed under reducing conditions.

Observed band size: 119 kDa

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