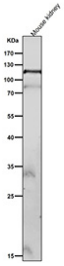
Phospho-FAK (pTyr576/pTyr577) Antibody / Focal Adhesion Kinase 1 [clone 32P46] (FY12572)

Catalog No.	Formulation	Size
FY12572	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human, Mouse
Format	Liquid
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	32P46
Purity	Affinity-chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	Q05397
Applications	Western Blot : 1:500-1:2000
Limitations	This Phospho-FAK (pTyr576/pTyr577) antibody is available for research use only.



Mouse kidney tissue lysate tested with Phospho-FAK (pTyr576/pTyr577) antibody at 1:2000 dilution for 1 hour at room temperature. Predicted molecular weight ~120 kDa.

Description

Phospho-FAK (pTyr576/pTyr577) antibody detects focal adhesion kinase 1 when phosphorylated at tyrosine residues 576 and 577. Focal adhesion kinase, encoded by the PTK2 gene, is a cytoplasmic tyrosine kinase that regulates adhesion, migration, and survival signaling. Autophosphorylation at Tyr397 recruits Src family kinases, which subsequently phosphorylate Tyr576 and Tyr577 within the kinase activation loop. Phosphorylation at these residues enhances catalytic

activity and promotes downstream signaling via MAPK and PI3K pathways.

Phospho-FAK (pTyr576/pTyr577) antibody is widely used in cancer biology, cell adhesion studies, and mechanotransduction research. Active FAK drives tumor progression, metastasis, and angiogenesis by promoting migration and survival of cancer cells. Detection of phosphorylation at Tyr576/577 provides a direct measure of FAK activation and signaling output. By using this antibody, researchers can evaluate FAK driven pathways in oncogenesis, wound healing, and fibrosis.

Western blot assays distinguish phosphorylated FAK from unmodified protein, while immunohistochemistry maps activation in tissues undergoing remodeling or tumor progression. Immunofluorescence highlights localization of phospho-FAK at focal adhesions, providing spatial insight into adhesion-dependent signaling events. These approaches allow comprehensive analysis of FAK activation in different systems.

Phosphorylation at Tyr576 and Tyr577 is essential for full kinase activation. It promotes conformational changes that enhance substrate binding and signaling complex assembly. Dysregulated FAK phosphorylation contributes to cancer cell invasion and therapy resistance. By applying Phospho-FAK (pTyr576/pTyr577) antibody, scientists can study therapeutic strategies that target adhesion-dependent kinase activity and its role in disease.

FAK signaling also participates in cardiovascular and developmental biology, where it regulates vascular remodeling, stem cell adhesion, and tissue morphogenesis. Its integration of mechanical and biochemical signals makes it a central regulator of cell behavior. The phospho-specific antibody therefore serves as a powerful tool for examining mechanosensitive signaling networks.

Phospho-FAK (pTyr576/pTyr577) antibody from NSJ Bioreagents ensures accurate detection of activated PTK2 in cancer, adhesion, and mechanotransduction research.

Application Notes

Optimal dilution of the Phospho-FAK (pTyr576/pTyr577) antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human Phospho-FAK (Y576 + Y577) was used as the immunogen for the Phospho-FAK (pTyr576/pTyr577) antibody.

Storage

Store the Phospho-FAK (pTyr576/pTyr577) antibody at -20oC.