ZYMED® Laboratories
invitrogen immunodetection

Qty: 50µg/200 µl

Rabbit anti-phospho-FAK-1 (Tyr397)

For Research Use Only

Catalog No. 36-7900

Lot No.

Rabbit anti-phospho-FAK-1 (Tyr397)

FORM
This polyclonal antibody is supplied as a 200 µl aliquot at a concentration of 0.25 mg/ml in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. This antibody is peptide-affinity purified from rabbit antiserum.

PAD: ZMD.292

IMMUNOGEN
Synthetic peptide derived from a sequence of the human FAK-1 protein, phosphorylated at Tyr397.

SPECIFICITY
This antibody reacts with the ~125 kDa FAK-1 protein when phosphorylated at Tyr397. No reactivity has been observed with the nonphosphorylated form of FAK-1.

REACTIVITY
Reactivity has been confirmed with PDGF-stimulated NIH/3T3 cell lysates. Based on amino acid sequence homology, this antibody is also expected to react with human, rat, and chicken.

Sample	Western Blotting	ELISA
Mouse	+++	ND
Immunogen	ND	+++

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

USAGE
Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

ELISA: 0.01-1µg/ml
Western Blotting: 0.5-3 µg/ml

STORAGE
Store at 2-8°C for up to one month. Store at –20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

BACKGROUND

Focal adhesion kinase (FAK) is a widely expressed ~ 125 kDa non-receptor cytoplasmic tyrosine kinase that is implicated in integrin-mediated signal transduction. Physical interactions of FAK with the integrin cytoplasmic domain and cytoskeletal proteins talin, paxillin, and/or tensin play a key role in FAK activation by facilitating its oligomerization and transphosphorylation.(1) FAK shows a rapid increase in tyrosine phosphorylation when cells are stimulated by diverse signaling molecules including those that regulate embryonic development, cell proliferation, migration and apoptosis. Activation of FAK by intergrin clustering induced by cell adhesion or by seven-transmembrane-domain receptors leads to the autophosphorylation of Tyr397, which allows binding to Src, Grb2, Fyn or phosphatidylinositol 3-kinase.(2) The major autophosphorylation site of FAK, Y397, has been determined to be a Src binding site through the SH2 domain of Src.(3) Fak is rapidly tyrosine-phosphorylated in cells stimulated by mitogenic neuropeptide agonists including bombesin and bioactive lipids including LPA that act via heptahelical GPCRs, polypeptide growth factors, bacterial toxins and activated variants of pp60 Src. Tyrosine phosphorylation and activation of FAK is an important point of convergence in the action of integrins, GPCR agonists, growth factors and oncogenes.

REFERENCES

1. Giancotti FG. *Curr Opin Cell Biol* 9:691-700, 1997.
2. Chen HC, et al. *J Biol Chem* 271: 26329-34, 1996.
3. Schaller MD, et al. *Mol Cell Biol* 14: 1680-8, 1994.

RELATED PRODUCTS

Product	***Clone/PAD****	***Cat. No.***
Mouse anti-p59^{fyn}	Fyn-1S	13-7800
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

*PAD: Polyclonal Antibody Designation

Conjugate	**ZyMAX™ Goat x Rabbit IgG (H+L)**	**ZyMAX™ Goat x Mouse IgG (H+L)**
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

dp030702