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ProductInformation

ANTI-FOCAL ADHESION KINASE (pp125^{FAK})
Developed in Rabbit
IgG Fraction of Antiserum

Product Number **F 2918**

Product Description

Anti-Focal Adhesion Kinase (pp125^{FAK}) is developed in rabbit using a synthetic peptide (Asp-Gln-Ala-Arg-Leu-Lys-Met-Leu-Gly-Gln-Thr-Arg-Pro-His) conjugated to KLH as immunogen. The peptide corresponds to the C-terminal region (amino acids 1039-1052) of human or mouse pp125^{FAK}. Whole antiserum is fractionated and then further purified by ion-exchange chromatography to provide the IgG fraction of antiserum which is essentially free of other rabbit serum proteins.

Focal adhesion kinase (pp125^{FAK}, FAK) is a 125 kDa intracellular protein tyrosine kinase which co-localizes primarily with several components of the cellular focal adhesions such as tensin, vinculin, and talin.[1-5] FAK comprises a highly conserved tyrosine kinase catalytic domain flanked by large amino and carboxy-terminal domains. The SH2 and SH3 motifs found in other cytoplasmic protein tyrosine kinases are lacking from FAK. The 159 amino acid C-terminal domain (FAT sequence) directs the association of FAK with cellular focal adhesions of cultured cells.[6] In certain cells this domain is autonomously expressed as 41-43 kDa polypeptide (FRNK, FAK-related non-kinase).[7] FAK is a major phosphotyrosine-containing protein in normal avian and rodent fibroblasts. In cells transformed by oncogenic variants of pp60^{src}, tyrosine phosphorylation of FAK is enhanced. FAK is highly conserved across species and is expressed in most cell lines and tissues examined. It is highly abundant in brain. Increased phosphorylation of this kinase occurs in fibroblasts, platelets, and carcinoma cells following integrins-extracellular matrix components engagement or subsequent to cross-linking of integrins with specific antibodies. Increased FAK phosphorylation is found during early development and in *in vitro* cultured cells exposed to mitogenic neuropeptides or neurotransmitters such as bombesin, vasopressin, and endothelin.[8] FAK was shown to be involved in cell spreading and migration and is thought to have an important role in human reepithelialization.[9,10]

Cells from FAK deficient mice were recently reported to manifest reduced cell motility and enhanced focal adhesion contact formation.[11] Polyclonal antibodies generated to FAK are useful tools for morphological and functional studies of FAK in developing and adult tissues and cells.

Reagents

The product is provided as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 0.1% sodium azide as preservative.

Precautions and Disclaimer

Due to the sodium azide content a material safety sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C. For extended storage freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

Product Profile

Anti-Focal Adhesion Kinase (pp125^{FAK}) reacts with a 125 kDa protein in extracts of the ECV304 human endothelial cultured cell line using immunoblotting and immunoprecipitation techniques. An additional, weaker, lower molecular weight band may be seen. Specific staining in immunoblotting is inhibited following preincubation of the diluted product with the pp125^{FAK} peptide. The product reacts with pp125^{FAK} in cultured human endothelial cells using indirect immunofluorescent staining.

Anti-Focal Adhesion Kinase ($pp125^{FAK}$) may be used for the immunolocalization of $pp125^{FAK}$ in various immunocytochemical methods using cultured cells and for detection of $pp125^{FAK}$ in various immunoassays including immunoprecipitation and immunoblotting.

In order to obtain best results, it is recommended that each user determine the optimal working dilution for individual applications by titration assay.

References

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