



PLATELET DERIVED GROWTH FACTOR β -RECEPTOR FRAGMENT 751-755 [pTyr⁷⁵¹]

Product Number **P 5365**

Product Description

Platelet Derived Growth Factor β -Receptor Fragment 751-755 [pTyr⁷⁵¹] has the amino acid sequence pTyr-Val-Pro-Met-Leu, corresponding to amino acids 751 through 755 of human PDGF β -Receptor (Swiss-Prot Accession Number P09619). This phosphorylated peptide inhibits the binding of the 85 kDa subunit of PI₃-kinase to the PDGF β -Receptor.¹ The peptide has a molecular weight of 703 Daltons.

Platelet derived growth factor (PDGF) isoforms are potent mitogens, survival factors and chemoattractants. They exert their actions via specific receptors on the cell surface. Two distinct human PDGF receptor transmembrane binding proteins have been identified, a 170 kDa α -receptor (PDGF R α)² and a 190 kDa β -receptor (PDGF R β).³ These two receptor proteins are structurally related and consist of an extracellular portion containing five immunoglobulin-like domains, a single transmembrane region, and an intracellular portion with a protein-tyrosine kinase domain.

PDGF binding induces receptor homo- or hetero-dimerization and the receptors then phosphorylate each other in trans on specific tyrosines. Thereby, a number of different signaling pathways are initiated leading to cell growth, actin reorganization, migration and differentiation.^{4,6}

Actin rearrangements and migration (i.e. chemotaxis) appear to be dependent on activation of phosphatidylinositol-3' kinase (PI3K) through the binding to phosphorylated tyrosine residues located in motifs (Tyr-X-X-Met) recognized by the Src homology 2 (SH2) domains of p85, the 85 kDa regulatory subunits of

Product Information

PI3K.^{6,7} p85 then associates with p110, the catalytic subunit, which continues the cascade by phosphorylating membrane lipids.⁸

Reagent

PDGF β -Receptor Fragment 751-755 [pTyr⁷⁵¹] is supplied as a lyophilized trifluoroacetate salt.

Preparation Instructions

The product is soluble in water.

Storage/Stability

Store at -20°C .

Product Profile

Purity: >97% as determined by HPLC

References

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5. Rosenkranz, S., and Kazlauskas, A., *Growth Factors*, **16**, 201-216 (1999).
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AC 8/31/01

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