# PLATELET DERIVED GROWTH FACTOR β-RECEPTOR FRAGMENT 572-589 [pTyr$^{579/581}$]

# ProductInformation

Product Number **P 3865**

## Product Description

Platelet Derived Growth Factor β-Receptor Fragment 572-589 [pTyr$^{579/581}$] has the amino acid sequence Val-Ser-Ser-Asp-Gly-His-Glu-pTyr-Ile-pTyr-Val-Asp-Pro-Met-Gln-Leu-Pro-Tyr corresponding to amino acids 572 through 589 of human PDGF β-Receptor (Swiss-Prot Accession Number P09619). This phosphorylated peptide inhibits the binding of Src family members to the PDGF β-Receptor. The molecular weight of the peptide is 2,273 Da.

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 Rα)[1] and a 190 kDa β-receptor (PDGF Rβ)[2]. 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.[3] The phosphorylated receptor then associates with various SH2 domain containing proteins including phospholipase C-γ (PLCγ), the GTPase activating protein of Ras (GAP), the regulatory subunit of phosphatidylinositol-3′ kinase (PI3K) and Src[4,5]. A number of different signaling pathways are thus initiated leading to cell growth, actin reorganization, migration and differentiation.[6-8]

Src binding requires phosphorylation of Tyr-579 and Tyr-581 within the juxtamembrane domain of PDGF β-Receptor.[9,10] Src binding to PDGF α-Receptor requires phosphorylation at Tyr-572 and Tyr-574.[11,12]

## Reagent

PDGF β-Receptor Fragment 572-589 [pTyr$^{579/581}$] 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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