



PDGFR beta (Human), Active Recombinant protein expressed in Sf9 cells

Cat# CY-SPP13

Lot No.
5 µg 0.1 µg/µl

Background:

PDGFR β (platelet-derived growth factor receptor beta) is a member of the PDGFR family of membrane receptors with intrinsic tyrosine kinase activity. PDGFR β deficient mice are hemorrhagic, severely anemic and exhibit a defect in kidney glomeruli function (1). However, absence of PDGFR β has no impact on major blood vessels and the heart. PDGFR β expression and activity is elevated in several cancers and inhibition of PDGFR β activity blocks progression of renal carcinoma in an animal model (2).

Product Description:

Recombinant human PDGFR β (557-end) was expressed by baculovirus in Sf9 insect cells using a N-terminal GST tag. The gene accession number is NM_002609.

Gene Aliases:

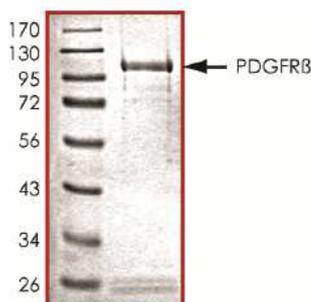
JTK12; PDGFR; CD140B; PDGFR1; PDGF-R-beta

Formulation:

Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 0.25mM DTT, 0.1mM EGTA, 0.1mM EDTA, 0.1mM PMSF, 25% glycerol.

Purity & Molecular Weight:

The purity was determined to be >90% by densitometry. Approx. MW 104kDa.



Storage:

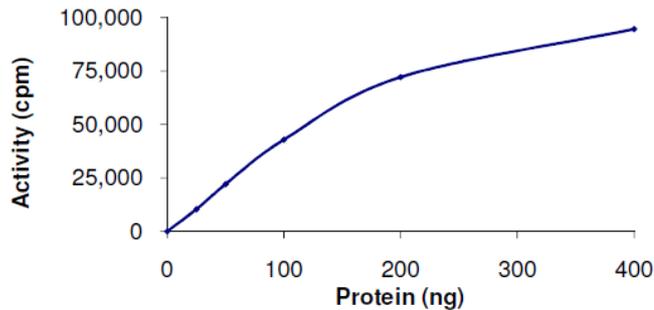
Store product at -70°C . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

Stability:

1 year at -70°C from date of shipment.

**Specific Activity:**

The specific activity was determined to be 22 nmol/min/mg as per Activity Assay Protocol.

**Activity Assay Protocol:**

Assay activity of the kinase in a 25 μ L reaction consisting of 5 μ L of 5 X Kinase Assay Buffer, 10 μ L of 1 mg/ml the Substrate Solution, 5 μ L of diluted kinase and 5 μ L of 250 μ M ATP solution containing [γ - 32 P] ATP (0.167 μ Ci/ μ L). Start the reaction by adding the ATP solution. Incubate for 15 minutes at 30°C. Terminate the reaction by spotting 20 μ L of the reaction mixture onto phosphocellulose P81 paper. Air-dry the P81 paper and sequentially wash 4 times for approximately 10 minutes each in 1% phosphoric acid with constant gentle stirring. Count the P81 paper in a liquid scintillation counter.

Substrate Solution:

Poly (Glu:Tyr, 4:1) synthetic peptide substrate diluted in distilled H₂O to a final concentration of 1 mg/ml.

5 X Kinase Assay Buffer:

25mM MOPS, 12.5mM β -glycerol-phosphate, 20mM MgCl₂, 25mM MnCl₂, 5mM EGTA, 2mM EDTA. Add 0.25mM DTT to Kinase Assay Buffer prior to use.

References:

1. Soriano, P: Abnormal kidney development and hematological disorders in PDGF beta-receptor mutant mice. *Genes Dev.* 1994 Aug 15;8(16):1888-96.
2. Xu, L. et al: Blocking platelet-derived growth factor-D/platelet-derived growth factor receptor beta signaling inhibits human renal cell carcinoma progression in an orthotopic mouse model. *Cancer Res.* 2005 Jul 1;65(13):5711-9.

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