

Cytokines

Human Recombinant PDGF-DD



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Platelet-derived growth factor DD

Catalog # 78222
78222.1

10 µg
50 µg

Product Description

The platelet-derived growth factor (PDGF) family has five heparin-binding members that assemble into four homodimers (PDGF-AA, PDGF-BB, PDGF-CC, and PDGF-DD) and one heterodimer (PDGF-AB; Fretto et al.; Li & Eriksson). PDGF signals through the receptor tyrosine kinases PDGFR α and PDGFR β . It has been shown that PDGF-induced migration involves signaling pathways involving MEK/ERK, EGFR, Src, and PI3K/AKT (Kim et al.). PDGF is a potent mitogen for cells of mesenchymal origin, such as fibroblasts, glial cells, and vascular smooth muscle cells. PDGF has been implicated in pathogenesis of atherosclerosis, glomerulonephritis, cancer, and in the contraction of vascular smooth muscle cells of rat aortic tissues (Fretto et al.; Sachinidis et al.). PDGF-DD promotes growth and survival of renal artery smooth muscle cells and lens epithelial cells, and can act as a macrophage chemoattractant (Changsirikulchai et al.; Lokker et al.; Ray et al.; Uutela et al.).

Product Information

Alternative Names: IEGF, Platelet-derived growth factor D, SCDGFB
Accession Number: Q9GZP0
Amino Acid Sequence: SYHDRKSKVD LDRLNDDAKR YSCTPRNYSV NIREELKLAN VVFFPRCLLV QRCGGNCGCG TVNWRSCNCGKTVKKYHE VLQFEPGHIK RRGRAKTMAL VDIQLDHHHER CDCICSSRPPR
Predicted Molecular Mass: 14.0 kDa
Species: Human
Cross Reactivity: Not determined
Formulation: Lyophilized after dialysis against phosphate-buffered saline.
Source: CHO

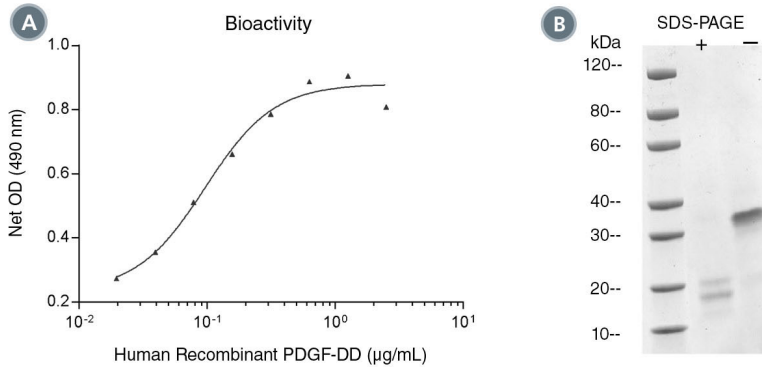
Specifications

Activity: The specific activity is $\geq 2.0 \times 10^2$ units/mg ($EC_{50} \leq 5 \mu\text{g/mL}$) as determined by a cell proliferation assay using 3T3 cells.
Purity: $\geq 95\%$
Endotoxin Level: Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is ≤ 0.2 EU/ μg protein.

Preparation and Storage

Storage: Store at -80°C .
Stability: Stable as supplied for 12 months from date of receipt.
Preparation: Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. As a general guide, do not store at $2 - 8^\circ\text{C}$ for more than 1 week or at -20°C for more than 2 months. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Human Recombinant PDGF-DD was tested by its ability to promote the proliferation of 3T3 cells. Cell proliferation was measured using a fluorometric assay method. The EC₅₀ is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC₅₀ in the above example is 0.097 $\mu\text{g/mL}$.

(B) Human Recombinant PDGF-DD was resolved with SDS-PAGE under reducing (+) conditions and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant PDGF-DD has a predicted molecular mass of 14.0 kDa.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References

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- Uutela M et al. (2004) PDGF-D induces macrophage recruitment, increased interstitial pressure, and blood vessel maturation during angiogenesis. *Blood* 104(10): 3198–204.

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