

Product Data Sheet

Recombinant Human PDGF-BB (carrier-free)

Catalog # / Size: 577302 / 10 µg
577304 / 25 µg
577306 / 100 µg
577308 / 500 µg

Source: Human PDGF-BB, amino acids Ser82-Thr190 (NM_033016) was expressed in *E. coli*.

Molecular Mass: The 109 amino acid recombinant protein has a predicted molecular mass of 12,294 Da. The DTT-reduced and the non-reduced protein migrate at approximately 13 and 37 KDa by SDS-PAGE respectively. The N-terminal amino acid is Serine.

Purity: >98%, as determined by Coomassie stained SDS-PAGE.

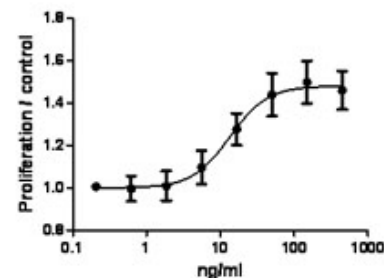
Endotoxin Level: Less than 0.01ng per µg cytokine as determined by the LAL method.

Activity: ED₅₀ = 10-20 ng/ml, corresponding to a specific activity of 1-0.5 x 10⁵ units/mg, as determined by the dose dependent stimulation of 3T3 cell proliferation. The bioactivity is equivalent to competitor reported values.

Preparation: 10-100 µg sizes are bottled at 200 µg/mL. 500 µg and larger sizes are bottled at the concentration indicated on the vial.

Formulation: 0.22µm filtered protein solution is in 29% acetonitrile, 0.1% TFA (trifluoroacetic acid).

Storage: Unopened vial can be stored at -20°C for six months or at -70°C for one year. For maximum results, quick spin vial prior to opening. Stock solutions should be prepared at no less than 10µg/mL in buffer containing carrier protein such as 1% BSA or HSA or 10% FBS. For long term-storage, aliquot into polypropylene vials and store in a manual defrost freezer. **Avoid repeated freeze/thaw cycles.**



Applications:

Applications: Bioassay

Application Notes: This PDGF-BB protein is biologically active, and can be used for in vitro assays

Application References: 1. Banerjee, P., *et al.* 2011. *J. Biol Chem.* 23:33580. PubMed.

Description: PDGF-BB is a mitogen initially identified as simian sarcoma viral oncogene homolog. It belongs to the PDGF family which includes five members, PDGF-AA, PDGF-BB, PDGF-AB, PDGFCC, and PDGF-DD. PDGF-AA, AB, and BB dimers are processed intracellularly and secreted as active dimers that readily activate PDGF receptors (PDGFRs). PDGF CC and DD are secreted as full-length, latent dimers, and the proteolytic removal of a CUB domain is required for the growth factor domain of PDGF CC or DD to activate the PDGF receptors. PDGF-BB exerts its biological functions through the activation of dimeric receptors made up of two structurally similar protein-tyrosine kinase receptor subunits ($\alpha\alpha$ -, $\alpha\beta$ -, or $\beta\beta$ -PDGFR). PDGF has been characterized as a chemoattractant for vascular smooth muscle cells from both sheep and humans and also for canine tracheal myocytes. In cutaneous remodelling, studies *ex vivo* revealed that PDGF-BB is a mitogen and chemoattractant for dermal fibroblast. Abnormalities of PDGFR/PDGF are thought to contribute to a number of human diseases, and especially malignancy. Autocrine signalling as a consequence of PDGF-B overexpression is clearly implicated in the pathogenesis of dermatofibrosarcoma protruberans (DFSP).

Antigen References: 1. Carlin SM, *et al.* 2003 *Am J Physiol Lung Cell Mol Physiol* 284:L1020-L1026.
2. Ustach CV, *et al.* 2005 *Mol Cell Biol* 25:6279-6288.
3. Jones AV, Cross NC, *et al.* 2004 *Cell Mol Life Sci.* 61:2912-2923.
4. Andrae J, *et al.* 2008 *Genes Dev.* 22:1276-1312.



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