RECOMBINANT HUMAN PROLACTIN (hPRL)

Catalog # 02646 **50 µg per vial**

PRODUCT DESCRIPTION:

Prolactin (PRL) is a neuroendocrine pituitary hormone. PRL is synthesized by the anterior pituitary, placenta, brain, uterus, dermal fibroblasts, decidua, B cells, T cells, NK cells and breast cancer cells. PRL is a lactogenic hormone, also involved in breast cancer development , regulation of reproductive function, and immunoregulation. In the immune system, PRL has been shown to be secreted by human PBMC and to act as a proliferative growth factor and an IFN-γ inducer. The mature protein containing 200 amino acid residues migrates with an apparent M_r of 23 kDa. PRL binds to a class I cytokine receptor. Prolactin signal transduction involves the JAK/STAT families and Src kinase family.

SOURCE:

A DNA sequence encoding the mature human prolactin protein sequence (aa residues 29 - 227) was expressed in *E. coli*.

PURITY:

Greater than 97%, as determined by SDS-PAGE and visualized by silver stain. Endotoxin level less than 0.1 ng per 1µg of the cytokine as determined by the LAL method.

FORMULATION:

Lyophilized from a 0.2 µm filtered solution in 30% CH_3CN, 0.1% TFA.

RECONSTITUTION:

It is recommended that sterile PBS containing at least 0.1% human serum albumin or bovine serum albumin be added to the vial to prepare a stock solution of no less than 10 µg/mL.

STABILITY/STORAGE:

Lyophilized samples are stable for greater than six months at -20°C to -70°C.

Reconstituted PRL can be stored under sterile conditions at 2°C to 4°C for one month or at -20°C to -70°C for three months without detectable loss of activity.

Avoid repeated freeze-thaw cycles.

ACTIVITY:

Activity was determined in a cell proliferation assay using the rat lymphoma, Nb2-11 and the ED_{50} for this effect was typically 0.03 - 0.1 ng/mL.

THIS REAGENT IS FOR RESEARCH USE ONLY.
IT IS NOT TO BE ADMINISTERED TO HUMANS.

STEMCELL TECHNOLOGIES INC
777 West Broadway, Suite 808
Vancouver, British Columbia
CANADA V5Z 4J7
Tel: (604) 877-0713 Toll-free Tel: 1-800-667-0322
Fax: (604) 877-0704 Toll-free Fax: 1-800-567-2899
Website: www.stemcell.com E-mail: info@stemcell.com
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RECOMBINANT HUMAN PLATELET-DERIVED GROWTH FACTOR-AB (hPDGF-AB)

Catalog # 02645	**10 µg per vial**
Catalog # 02845	**50 µg per vial**

PRODUCT DESCRIPTION:

Platelet-derived growth factor (PDGF) is not one molecule but three, each a dimeric combination of two distinct but structurally related peptide chains designated A and B. The dimeric isoforms PDGF-AA, AB and BB are differentially expressed in various cell types and their effects are mediated through two distinct receptors, termed α and β. Differences exist in isoform binding to each receptor. In general, PDGF isoforms are potent mitogens for connective tissue cells, including dermal fibroblasts, glial cells, arterial smooth muscle cells and some epithelial and endothelial cells. In addition to its activity as a mitogen, PDGF is chemotactic for fibroblasts, smooth muscle cells, neutrophils and mononuclear cells. PDGF also appears to be ubiquitous in neurons throughout the CNS, where it is suggested to play an important role in neuron survival and regeneration, and in mediation of glial cell proliferation and differentiation. The disulfide-linked heterodimeric recombinant PDGF-AB has a predicted molecular mass of approximately 27 kDa.

SOURCE:

A DNA sequence encoding the long form of mature human PDGF-A chain protein (containing the exon 6 sequence) and a DNA sequence encoding the 109 amino acid residue mature human PDGF-B chain protein (c-terminally processed form) were expressed in *E. col*i. Human PDGF-AB was dimerized *in vitr*o.

PURITY:

Greater than 97%, as determined by SDS-PAGE and visualized by silver stain. Endotoxin level less than 0.1 ng per 1 µg of the cytokine as determined by the LAL method.

FORMULATION:

Lyophilized from a 0.2 µm filtered solution in 30% acetonitrile plus 0.1% TFA in the absence of any carrier protein.

RECONSTITUTION:

It is recommended that sterile 4 mM HCl containing at least 0.1% human serum albumin or bovine serum albumin be added to the vial to prepare a stock solution of no less than 10 µg/mL of the cytokine.

STABILITY/STORAGE:

Lyophilized samples are stable for greater than six months at -20ºC to -70ºC.
Reconstituted hPDGF-AB can be stored under sterile conditions at 2ºC to 4ºC for one month or at -20ºC to -70ºC for three months without detectable loss of activity.
Avoid repeated freeze-thaw cycles.

ACTIVITY:

Activity was determined by ability to stimulate ^{3}H-thymidine incorporation in quiescent NR6R-3T3 fibroblasts and the ED_{50} for this effect was typically 1.0 - 3.0ng/mL.

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