cellsciences.com

Recombinant full length human Pim1 kinase containing N-terminal GST tag

Catalog No.	CRP107A	**Quantity:**	5 µg
	CRP107B		20 µg

Description: Recombinant full length human Pim1 containing N-terminal GST tag was expressed by baculovirus in Sf 9 insect cells.

The proto-oncogene Pim1 belongs to a family of serine/threonine protein kinases that are highly conserved through evolution in multicellular organisms. Originally identified from Moloney mouse leukemia virus induced T-cell lymphomas in mice, Pim1 is involved in the control of cytokine-mediated cell proliferation, differentiation and survival of lymphoid and myeloid cells as well as others. Expression of Pim1 can be stimulated by a variety of growth factors and is regulated at four different levels: transcriptional, post-transcriptional, translational and post-translational. Accumulating data support that the expression of Pim1 is mediated through activation of the JAK/STAT pathway. Some of the substrates of Pim1 include p21 Cip1, nuclear mitotic appartus protein, PTP-U2S and Socs-1. Recently, Pim1 has been shown to enhance the activities of p100, c-Myb and Cdc 25a and in part this might explain reported effects of Pim1 on mitogenesis. Pim1 interacts with c-Myb via the DNA binding domain and regulates its transcriptional activity.

Concentration: 0.1 mg/ml

Gene Accession No: NM_002648

Source: Sf9 insect cells

Formulation: Recombinant protein in storage buffer (50 mM Tris-HCl + 150 mM NaCl + 0.25 mM DTT + 0.1 mM EGTA + 0.1 mM EDTA + 0.1 mM PMSF + 25% glycerol; pH 7.5).

Purity: 1 µg of Pim1 protein was subjected to SDS-PAGE and Coomassie blue staining. The scan of the gel showed >90% purity of the Pim1 product, and the band was at ~62 kDa (Fig. 2)

Specific Activity: 316 nmol/min/mg: 316 nmol phosphate incorporated into the S6K substrate peptide per minute per mg protein at 30ºC for 15 minutes using a final concentration of 50 µM ATP (0.83 µCi/assay). See QA/QC section for details.

Storage & Stability: Store product frozen at or below -70ºC. Stable for 1 year at -70ºC as undiluted stock. Aliquot to avoid repeated thawing and freezing.

Cell Sciences, Inc.
480 Neponset Street
Bldg 12A
Canton, MA 02021

Toll Free: 888-769-1246
Phone: 781-828-0610
Fax: 781-828-0542

E-mail: info@cellsciences.com
Web site: www.cellsciences.com

QA/QC:

Pim1 protein (100 ng/µl concentration) was diluted to 20 ng/µl with assay dilution buffer (4 mM MOPS + 2.5 mM β-glycerophosphate + 1 mM EGTA + 0.4 mM EDTA + 4 mM $MgCl_2$ + 0.05 mM DTT; pH 7.2), followed by 2-fold serial dilutions, and then the 10µl diluted proteins were used to phosphorylate the S6K substrate peptide (CKRRRLASLR) in the following assay condition:

- 10 µl diluted Pim1 protein
- 10 µl S6K substrate peptide (1 mg/ml stock)
- 5 µl [^{32}P] ATP mixture (250 µM ATP, 0.16 µCi/µl in 4x assay dilution buffer)

The various reaction components, except [^{32}P] ATP, were incubated at 30°C and the reaction started by the addition of [^{32}P] ATP. After 15 minutes, the reaction was terminated by spotting 20 µl of the reaction mixture onto a phosphocellulose P81 paper. The P81 paper was dried and washed several times in 1% phosphoric acid prior to counting in the presence of scintillation fluid in a scintillation counter. The actual counts, using various dilutions of the enzyme in the assay, are shown in Fig. 1.

Fig. 1 Pim1 activity assay

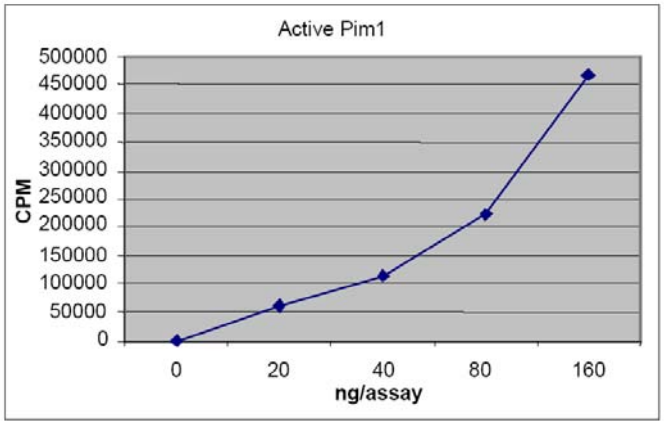
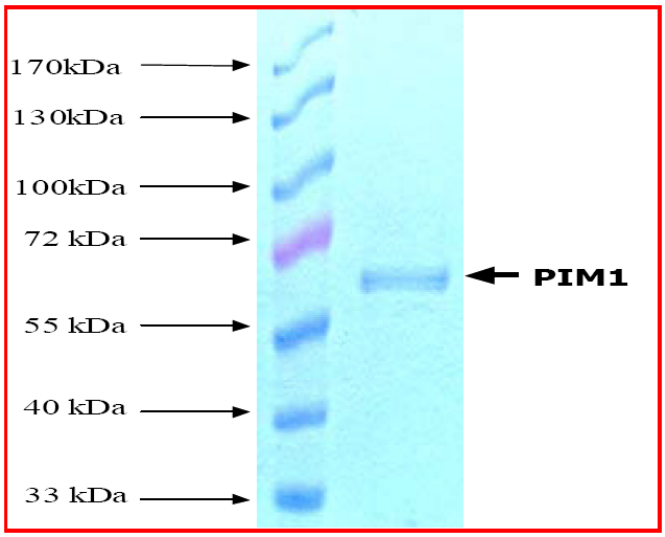


Fig. 2 Pim1 protein gel



Please note: always centrifuge vials before opening.

NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

Cell Sciences, Inc.
480 Neponset Street
Bldg 12A
Canton, MA 02021

Toll Free: 888-769-1246
Phone: 781-828-0610
Fax: 781-828-0542

E-mail: info@cellsciences.com
Web site: www.cellsciences.com