

Recombinant Human Pim-1 Oncogene, His-tagged

Cat. No. PIM1-1288H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant humanfull length PIM1, His-tagged. The proto-oncogene PIM1 is upregulated inprostate cancer. No special measures were taken to activate this kinase.
Species	Human
Source	Insect Cells
Description	PIM1 is aproto-oncogene which encodes for the serine/threonine kinase of the samename. The PIM1 oncogene was first described in relation to murine T-celllymphomas, as it was the locus most frequently activated by the Moloney murineleukemia virus. Subsequently, the oncogene has been implicated in multiplehuman cancers, including prostate cancer, acute myeloid leukemia and otherhematopoietic malignancies.
Form	Liquid in 50 mMTris, pH 7.5 + 500 mM NaCl + 0.5 mM EDTA + 0.05% Triton X-100 + 2 mM DTT +50% glycerol.
Concentration	0.18 mg/mL totalprotein as measured using the Bradford protein assay with BSA as a standard.
Molecular Weight	40.7 kDa
Purity	90% as determined bya Coomassie blue-stained SDS-PAGE gel

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Mass Spectrometry	The protein was digested with trypsin followed by LC-MS/MS. The resulting MS/MS data verified PIM1 identity from 8 peptides that covered 13% of the amino acid sequence of the recombinant protein.
Assay Conditions	The enzyme was pre-diluted in enzyme dilution buffer and assayed in 50 mM Tris (pH 7.5), 10mM MgCl ₂ , 2 mM DTT, 0.025% Triton® X-100, 200 μ M ATP, 100 μ M PIM1 peptide substrate and trace [³² P]- γ -ATP for 10 minutes at 30°C.
Specific Activity	8680 nmole of phosphate transferred to PIM1 peptide substrate (AKKRRLSA) per minute per mg of total protein at 30°C. Activity determined at a final protein concentration of 0.083 g/mL.
Dilution Buffer	20 mM Tris (pH 7.5), 0.05% Triton® X-100, 0.1 mg/mL BSA, 0.5 mM Na ₃ VO ₄ , 2 mM DTT, 10% Glycerol.
Storage Buffer	50 mM Tris (pH 7.5), 500 mM NaCl, 0.5 mM EDTA, 0.05% Triton® X-100, 2 mM DTT, 50% Glycerol.
Storage	Store at -80°C. At first use, aliquot and store at -80°C to avoid multiple freeze-thaws. If properly stored at -80°C, this product is stable for 6 months from date of purchase. This protein comes out of solution at low salt concentrations. Avoid repeated freeze-thaw cycles.
Official Symbol	PIM1
Full Length	Full L.

GENE INFORMATION

Gene Name PIM1 pim-1 oncogene [Homo sapiens]

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Synonyms	PIM1; pim-1oncogene; PIM; Proto-oncogene serine/threonine-protein kinase Pim-1; EC2.7.11.1
Gene ID	5292
mRNA Refseq	NM_002648
Protein Refseq	NP_002639
MIM	164960
UniProt ID	P11309
Chromosome Location	6p21.2
Pathway	Acute myeloidleukemia; Jak-STAT signaling pathway; C-MYB transcription factor network;IL-5 Signaling Pathway; Role of Calcineurin-dependent NFAT signaling inlymphocytes; Validated targets of C-MYC transcriptional activation
Function	ATP binding;nucleotide binding; manganese ion binding; metal ion binding; proteinbinding; protein serine/threonine kinase activity; transcription factorbinding
PDB rendering basedon 1xqz.	