

# Recombinant human Pin1 protein

Catalog Number: PIN3001

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

1-163aa

### UniProt No.

Q13526

### NCBI Accession No.

NP\_006212.1

### Alternative Names

Protein (peptidyl-prolyl cis/trans isomerase) NIMA-interacting 1, PIN1, Peptidyl-prolyl cis-trans isomerase NIMA-interacting 1, EC 5.2.1.8, Rotamase Pin1, PPlase Pin1, DOD, uBL5, PIN1, PPlase, EC 5.2.1.8, Rotamase Pin1, PPlase Pin1, Peptidyl-prolyl cis-trans isomerase NIMA-interacting 1

## PRODUCT SPECIFICATION

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### Molecular Weight

18.2 kDa (163aa) confirmed by MALDI-TOF

### Concentration

1mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 7.5) 0.1M NaCl, 5mM DTT, 20%glycerol

### Purity

> 95% by SDS-PAGE

### Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

### Biological Activity

Specific activity is > 1,200nmol/min/mg, and is defined as the amount of enzyme that cleaves of suc-AAPF-pNA per minute at 37C.

### Tag

Non-Tagged

### Application

SDS-PAGE, Enzyme Activity

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

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## BACKGROUND

### Description

Human Pin 1 is a peptidyl-prolyl cis/trans isomerase (PPIase) that interacts with NIMA and essential for cell cycle regulation. Pin1 is nuclear PPIase containing a WW protein interaction domain, and is structurally and functionally related to Ess1/Ptf1, an essential protein in budding yeast. PPIase activity is necessary for Ess1/Pin1 function in yeast. Pin1 is thus an essential PPIase that regulates mitosis presumably by interacting with NIMA and attenuating its mitosis-promoting activity. Substrates of Pin1 include the mitotic regulators (Cdc25 phosphatase and NIMA, PLK I, Wee, and Myt1 kinases), several transcription factors like beta-Catenin, c-Jun, and the tumor suppressor protein p53, and some specific proteins like the RNA Pol II, the cytoskeleton protein tau, and the G1/S protein Cyclin D1.

### Amino acid Sequence

MADEEKLPFG WEKRMSRSSG RYYFNHITN ASQWERPSGN SSSGGKNGQG EPARVRCSHL LVKHSQSRRP SSWRQEKITR  
TKEALELIN GYIQKIKSGE EDFESLASQF SDCSSAKARG DLGAFSRGQM QKPFEDASFA LRTGEMSGPV FTDSGIHIL RTE

### General References

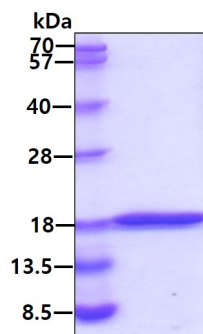
Wulf GM., et al. (2002) J Biol. Chem. 277(50):47976-47979

Hamdane M., et al. (2002) J Mol Neurosci. 19(3): 275-287

Zheng H, et al. (2002) Nature. 419(6909) 853-857

## DATA

### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain