



Human Pin1  
Product Data Sheet  
For Research Use Only, Not for use in diagnostic procedures

## Human Pin1

Human, recombinant protein expressed in *E. coli*.

Cat# CY-R2148

Amount: 100 µg (1.0 µg/µl)  
Lot:

### Introduction:

The unique prolyl isomerase, Pin1, has been found to regulate mitosis through a simple conformational change (1) the cis-trans isomerization of phosphorylated Ser/Thr-Pro amide bonds in a variety of key cell cycle regulatory phosphoproteins, including the Cdc25 phosphatase, the p53 oncogene, and the c-Myc oncogene (1-3). Importantly, Pin1-catalyzed post-phosphorylation conformational changes can have profound effects on many key proteins in diverse cellular processes (4). Cells depleted of Pin1 are characterized by premature entry into mitosis, followed by mitotic arrest, nuclear fragmentation, and apoptosis, while overexpression of Pin1 inhibits the G2 to M transition (2, 5). Hence, Pin1 acts as a negative regulator for mitotic activity in G2, preventing lethal premature entry into mitosis. Pin1 is present at higher concentrations during mitosis (6), making it a potential target in the continuously dividing cells of cancer. The central role Pin1 plays in the cell cycle makes it an interesting target for inhibition, both for potential anticancer activity and for elucidation of the mechanism of mitosis.

### Product Description:

Full length of human PIN1, containing an N-terminal GST tag, expressed in *E. coli*. and purified by GSH agarose chromatography.

### Gene Information:

The gene accession number is NM\_006221. The OMIM number is 601052.

### Gene Aliases:

peptidyl-prolyl cis-trans isomerase NIMA-interacting 1, DODO

### Formulation:

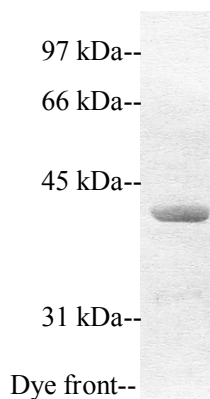
Recombinant Pin1 is supplied frozen in phosphate buffered saline (PBS) containing 50 % glycerol.



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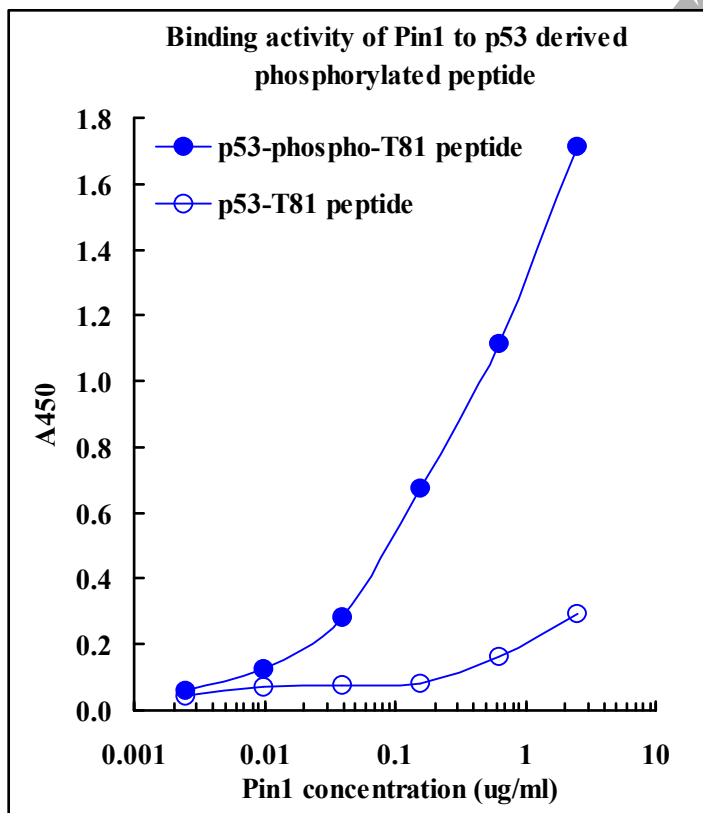
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**Molecular Weight:** 42 kDa



Recombinant Pin1 demonstrates approximately 42 kDa band by SDS-PAGE analysis.

Coomassie blue stain



Binding assay was performed by using immobilized phosphopeptide and non-phosphopeptide surrounding T81 of p53, recombinant Pin1(GST-Pin1: CY-R2272) and anti-GST antibody.



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**Storage:**

Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, AVOID REPEATED HANDLING AND MULTIPLE FREEZE/THAW CYCLES.

**Stability:**

Unopened vial at -70 °C, for 1 year after delivery.

**References:**

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4. Lu KP, Zhou XZ. *Nat Rev Mol Cell Biol* **8**: 904, 2007
5. Rippmann JF, Hobbie S, Daiber C, Guilliard B, Bauer M, Birk J, Nar H, Garin-Chesa P, Rettig WJ, Schnapp A. *Cell Growth Differ* **11**: 409, 2000
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