

# Human DEP1 / PTPRJ Protein (aa 997-1337, His Tag)

Catalog Number: 13165-H07E



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

CD148; DEP1; HPTPeta; R-PTP-ETA; SCC1

### Protein Construction:

A DNA sequence encoding the human PTPRJ (Q12913) cytoplasmic domain (Arg 997-Ala 1337) was expressed, with a polyhistidine tag at the N-terminus.

**Source:** Human

**Expression Host:** E. coli

## QC Testing

**Purity:** > 95 % as determined by SDS-PAGE

### Endotoxin:

Please contact us for more information.

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Met

### Molecular Mass:

The recombinant human PTPRJ (aa 997-1337) consists of 352 amino acids and has a calculated molecular mass of 41KDa. It migrates as an approximately 37 kDa band in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile PBS, pH 7.5

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

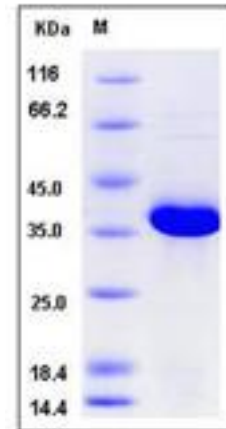
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

DEP1 / PTPRJ (Receptor-type tyrosine-protein phosphatase eta) is a member of the protein tyrosine phosphatase (PTP) family. PTPs are known to be signaling molecules that regulate a variety of cellular processes, including cell growth, differentiation, mitotic cycle, and oncogenic transformation. DEP1 / PTPRJ possesses an extracellular region containing five fibronectin type III repeats, a single transmembrane region, and a single intracytoplasmic catalytic domain, and thus represents a receptor-type PTP. DEP1 / PTPRJ is present in all hematopoietic lineages, and was shown to negatively regulate T cell receptor signaling possibly through interfering with the phosphorylation of Phospholipase C Gamma 1 and Linker for Activation of T Cells. This protein can also dephosphorylate the PDGF beta receptor, and may be involved in UV-induced signal transduction. In stable MCF-7 cell lines, induction of DEP-1 expression inhibited breast cancer cell growth by 5-10-fold. These data describe PTPs expressed and regulated in breast cancer cell lines during differentiation and identify one PTP, DEP-1, that inhibits the growth of breast cancer cells in vitro.

## References

- 1.Holsinger LJ, *et al.* (2002) The transmembrane receptor protein tyrosine phosphatase DEP1 interacts with p120. *Oncogene*. 21(46): 7067-76.
- 2.Huang X, *et al.* (2009) Natural variation at the DEP1 locus enhances grain yield in rice. *Nat Genet*. 41(4): 494-7.
- 3.Kuramochi S, *et al.* (1996) Molecular cloning and characterization of Byp, a murine receptor-type tyrosine phosphatase similar to human DEP-1. *FEBS Lett*. 378(1): 7-14.

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