



**PRL-2 (2-167). E.coli Active Enzyme**  
Protein tyrosine phosphatase, catalytic domain, phosphatase of regenerating liver2.

**BACKGROUND**

Mouse PRL-2, also known as Protein tyrosine phosphatase 4a2 (Ptp4a2) is a unique nuclear protein tyrosine phosphatase (PTP) that plays a central role in regulating diverse cellular processes. PRL-1 is induced in mitogen-stimulated cells and regenerating liver. Mouse PRL-2 exhibit 87% identity to mouse PRL-1 in their amino acid sequences. All mouse PRL proteins contain a C-terminal consensus sequence for prenylation. All PRL proteins bear significant sequence homology to Cdc14p and the tumor suppressor PTEN/MMAC1. PRL-2 is preferentially expressed in skeletal muscle. PRL-2 is also expressed at lower levels in other tissues

**ACTIVITY**

2.3 pmole/min/ $\mu$ g of enzyme; Determined using DiFMUP; Reaction conditions: 100  $\mu$ M DiFMUP, 10 min incubation at 30°C, 5  $\mu$ g enzyme.

**PURITY**

>90%

**APPLICATIONS**

**ORDERING INFORMATION**

**CATALOG NUMBER**

X1658E

**SIZE**

10  $\mu$ g

**CUSTOMER STORAGE**

Enzyme should be stored at -20°C.  
Enzyme should be kept on ice when dispensing

**FORMULATION**

25 Mm Tris-HCl, pH 8.0, 75 mM NaCl, 0.05% Tween-20, 50% glycerol, 2 mM EDTA, 1 mM DTT, 10 mM glutathione.

**SHIP CONDITIONS**

Ship on gel ice, store at -20°C immediately upon arrival

**STABILITY**

Products are stable for one year from purchase when stored properly

**CONCENTRATION**

See vial for concentration

**SOURCE**

Recombinant enzyme produced in E. coli

## **ASSAY METHODS**

### **MATERIALS**

1. Assay Buffer: 50 mM Bis-Tris, pH 7.63, 2 mM EDTA, 2 mM DTT
3. 10 mM DiFMUP
4. 96-well black microtiter plate
5. Microtiter plate reader capable of reading fluorescence at an excitation of 355 nm and emission at 460 nm
6. Water bath or incubator at 30°C

### **PROCEDURE**

1. Prepare reaction mixture in a 96-well **black plate**:
  - a. 90  $\mu$ l assay buffer
  - b. 1  $\mu$ l DiFMUP (Final concentration of DiFMUP is 100  $\mu$ M)
  - c. 1  $\mu$ l of PRL-2
2. Mix well and start reaction at 30°C in water bath and incubate for 10 min.
3. Read fluorescence at 355/460 nm using a microtiter plate reader.

### **REFERENCES**

[1] Zeng Q, Hong W, Tan YH. Mouse PRL-2 and PRL-3, two potentially prenylated protein tyrosine phosphatases homologous to PRL-1. *Biochem Biophys Res Commun.* 1998 Mar 17;244(2):421-7.

### **PRODUCT SPECIFIC REFERENCES**

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