



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/ μ g of enzyme; Determined using DiFMUP; Reaction conditions: 100 μ M DiFMUP, 10 min incubation at 30°C, 5 μ g enzyme.

PURITY

>90%

APPLICATIONS

Useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.

ORDERING INFORMATION

CATALOG NUMBER

X1658E

SIZE

10 μ g

CUSTOMER STORAGE

Product should be stored at -80°C.
Aliquot to avoid freeze/thaw cycles

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 dry ice, freeze 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 μ l assay buffer
 - b. 1 μ l DiFMUP (Final concentration of DiFMUP is 100 μ M)
 - c. 1 μ 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