



PTP-PEST (2-300)/PTPN12 N Terminal GST Tag. E.coli Active Enzyme
Protein-tyrosine phosphatase G1, PTPG1

BACKGROUND

PEST also known as Tyrosine-protein phosphatase, non-receptor type 12 (PTPN12), Protein-tyrosine phosphatase G1 or PTPG1 is a protein-tyrosine phosphatase (PTP) involved in regulating the Wiskott-Aldrich syndrome protein (WASp). WASp is tyrosine dephosphorylated by (PTP)-PEST via proline, serine, threonine phosphatase interacting protein (PSTPIP)1 binding. PTP-PEST combined with PSTPIP1 inhibits WASp-driven actin polymerization and synapse formation. PTP-PEST plays a central role in regulating WASp and is absolutely required for WASp contributions to T cell activation.

ACTIVITY

1.5 nmole/min/ μ g of enzyme; Determined using pNPP; Reaction conditions: 50 μ M pNPP, 10 min incubation at 30°C, 1 μ g enzyme.

PURITY

>80%

APPLICATIONS

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

ORDERING INFORMATION

CATALOG NUMBER

X1664E

SIZE

20 μ g

CUSTOMER STORAGE

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

FORMULATION

Provided in 25 mM Tris-HCl, 75 mM NaCl, pH 8.0, 0.05% Tween, 5 mM DTT and 50% glycerol

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 HEPES, pH 7.4, 100 mM NaCl, 2 mM EDTA, 3 mM DTT
2. Stop solution: 2M K₂CO₃
3. 190 mM pNPP
4. Microtiter plate
5. Microtiter plate reader capable of measurements at 405 nm
6. Water bath or incubator at 30°C

PROCEDURE

1. Prepare reaction mixture:
 - a. 73 μ l assay buffer
 - b. 26 μ l pNPP (Final concentration of pNPP is 50 mM)
 - c. 1 μ l of PTP-PEST
2. Mix well and start reaction at 30°C in water bath and incubate for 10 min.
3. Add 100 μ l per well of 2 M K₂CO₃ to stop the reaction.
4. Read absorbance at 405 nm using a microtiter plate reader.

REFERENCES

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PRODUCT SPECIFIC REFERENCES