

Recombinant PEST (2–300)/PTPN12 Active Enzyme

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.

ORDERING INFORMATION

CATALOG NUMBER
X1664E

SIZE
10 μ g

STORAGE CUSTOMER
Product should be stored at -20°C . Aliquot to avoid freeze/thaw cycles

STABILITY
Products are stable for one year from purchase when stored properly

SHIP CONDITIONS
Ship on gel ice, freeze upon arrival

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

CONCENTRATION
0.5 mg/ml

SOURCE
Recombinant enzyme produced in *E. coli*

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

>95% pure as determined by Coomassie-stained SDS gel

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 K_2CO_3
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 K_2CO_3 to stop the reaction.
4. Read absorbance at 405 nm using a microtiter plate reader.

For research use only. Not for use in human diagnostics or therapeutics.

REFERENCES

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