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/μg of enzyme; Detemined using pNPP; Reaction conditions: 50 μM pNPP, 10 min incubation at 30ºC, 1 μg enzyme.

Purity

>80%

Applications

Ordering Information

Catalog Number
X1664E

Size
20 μg

Customer Storage
Enzyme should be stored at -20ºC. Enzyme should be kept on ice when dispensing

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 gel ice, store at -20ºC immediately upon arrival

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

Concentration
See vial for concentration

Source
Recombinant enyzme produced in E. coli

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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 30ºC

Procedure

1. Prepare reaction mixture:
a. 73 μl assay buffer
b. 26 μl pNPP (Final concentration of pNPP is 50 mM)
c. 1 μl of PTP-PEST
2. Mix well and start reaction at 30ºC in water bath and incubate for 10 min.
3. Add 100 μl per well of 2 M K_2CO_3 to stop the reaction.
4. Read absorbance at 405 nm using a microtiter plate reader.

References

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Product Specific References

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