MEG-2 (285-593)/PTPN9. E.coli Active Enzyme

Protein-tyrosine phosphatase MEG2, PTPase-MEG2

Background

MEG-2 also known as PTPN9 is a protein-tyrosine phosphatase originally isolated from peripheral neutrophilic polymorphonuclear leukocytes (PMN). MEG2 is predominantly cytosolic with components present in secondary and tertiary granules and secretory vesicles. MEG2 activity is inhibited after exposure of cells to opsonized zymosan or to phorbol 12-myristate 13-acetate but largely unaffected by the f-met-leu-phe (N-formyl-methionyl-leucyl-phenyalanine). Cysteine 515 is essential for catalytic activity of MEG-2, whereas the noncatalytic (N-terminal) domain of MEG2 negatively regulates the enzymatic activity of the C-terminal phosphatase domain. The activity of MEG2 is enhanced by specific polyphosphoinositides. MEG2 associates at an early stage with nascent phagosomes. MEG2 is a polyphosphoinositide-activated tyrosine phosphatase that may be involved in signaling events regulating phagocytosis, and essential antimicrobial function in the immune response.

Ordering Information

Catalog Number
X1662E

Size
20 µg

Customer Storage
Product should be stored at -80ºC. Aliquot to avoid freeze/thaw cycles

Formulation
Provided in 25 mM Tris-HCl, pH 8.0, 67 mM NaCl, 50% glycerol, 1.4 mM KCl, 3 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 enyzme produced in E. coli

Activity

1070 pmole/min/µg of enzyme; Detemined using pNPP; Reaction conditions: 1 mM pNPP, 15 min incubation at room temperature, 2 ng/µl enzyme.

Purity

>90% pure as determined by Coomassie-stained SDS gel

Applications

Study of enzyme kinetics, screening inhibitors, and selectivity profiling.

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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 MEG-2
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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