PTPbeta (1675-1996) N Terminal GST Tag. E.coli Active Enzyme

Background

PTP beta, also known as Receptor-type tyrosine-protein phosphatase beta [Precursor], Protein-tyrosine phosphatase beta,R-PTP-beta, PTPRB or PTPB is a protein tyrosine phosphatase and is overexpressed in glioblastoma tumors. PTP beta plays a n important functional role in tumor cell migration and adhesion. Glioblastomas express at least three splice variants of PTPbeta, including long and short receptor forms. The short form of PTPbeta lacks exon 12, which encodes 860 amino acids located in the extracellular domain. In normal brain tissue and graded astrocytomas the long and short PTPbeta forms have an overlapping expression pattern. U87 stable cell lines overexpressing long or short PTPbeta migrate faster and adhere more robustly than parental U87 cells. The involvement of long and short PTPbeta in glioma tumor cell biology also contributes to the value of PTPbeta as a cancer target.

Ordering Information

Catalog Number
X1665E

Size
20 μg

Customer Storage
Product should be stored at -80ºC. 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 enyzme produced in E. coli

Activity

45 nmole/min/μg of enzyme; Detemined using pNPP; Reaction conditions: 50 μM pNPP, 10 min incubation at 30ºC, 20 ng enzyme.

Purity

>95% pure as determined by SDS-PAGE

Applications

Useful for the 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 PTP-beta
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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