

Recombinant Human PTK6 / GST

Catalog Number: 10682-H09B

General Information

Gene Name Synonym:

BRK, FLJ42088, PTK6

Protein Construction:

A DNA sequence encoding the full length of human PTK6 (NP_005966.1) (Met 1 - Thr 451) was fused with the GST tag at the N-terminus

Source: Human

Expression Host: Baculovirus

QC Testing

Purity: > 89 % as determined by SDS-PAGE

Bio-activity:

The specific activity of PTK6 was determined to be 48 nmol / min / mg using a Poly (Glu:Tyr, 4:1) synthetic peptide substrate

Endotoxin:

< 1.0 EU per µg protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

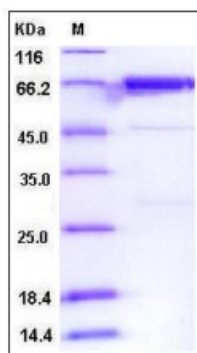
Molecular Mass:

The recombinant human GST/PTK6 chimera consists of 676 amino acids and predicts a molecular mass of 78 KDa. It migrates as an approximately 70 KDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM Tris, 100mM NaCl, pH 8.0 10% glycerol

SDS-PAGE:



Usage Guide

Storage:

Store it under sterile conditions at -70°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage. Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Tyrosine-protein kinase 6 (PTK6), also known as Breast tumor Kinase (BRK), is a Src-like nonreceptor tyrosine kinase, which belongs to Tyr protein kinase family. It is overexpressed in the majority of breast cancer and several other cancer types, while being detected at appreciable levels in only a limited range of adult tissues that does not include the mammary gland. PTK6 contains SH3, SH2, and Kinase domains, with a linker region (Linker) between the SH2 and Kinase domains, and the structural basis of the SH3-Linker interaction that results in auto-inhibition of PTK6. Human PTK6 is 79% aa identical to mouse PTK6. PTK6 has been shown to interact with STAP2 and KHDRBS1. In ErbB-Brk-Rac-p38 MAPK pathway, PTK6 is a critical mediator of breast cancer cell migration. The effect of PTK6 on the regulation of phosphoinositide 3-kinase and Akt activity may account for PTK6's ability to enhance mammary cell mitogenesis, raises the possibility that breast tumours. PTK6 is implicated in EGF receptor-dependent signalling and epithelial tumorigenesis. As a stress-induced kinase, it promotes apoptosis by inhibiting prosurvival signaling. In addition, PTK6 may play a key role in lymphomagenesis, hence identifying the kinase as a potential therapeutic target in lymphomas.

References

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2. Haegebarth, A. et al., 2006, Mol Cell Biol. 26 (13): 4949-4957.
3. Kasprzycka, M. et al., 2006, Am J Pathol. 168 (5): 1631-1641.
4. Ostrander, JH. et al., 2007, Cancer Res. 67 (9): 4199-4209.
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6. Aubele, M. et al., 2008, Br J Cancer, 99 (7): 1089-1095.

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