

BMX (Human), Active

Full-length recombinant protein expressed in Sf9 cells

Cat# CY-SPB07

Lot No. B034-2
5 µg 0.1 µg/µl

Background:

The BMX gene encodes a non-receptor tyrosine kinase, which may play a role in the growth and differentiation of hematopoietic cells (1). The BMX gene is located on chromosomal band Xp22.2 between the DXS197 and DXS207 loci. Interestingly, chromosome X also contains the closest relative of BMX, the BTK gene, implicated in X-linked agammaglobulinemia. BMX, is found to induce activation of the Stat signaling pathway (2).

Product Description:

Recombinant full-length human BMX was expressed by baculovirus in Sf9 insect cells using a N-terminal GST tag. The gene accession number is NM_001721.

Gene Aliases:

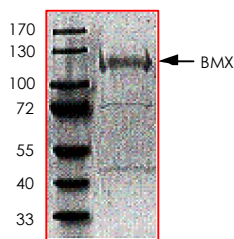
ETK; PSCTK2; PSCTK3

Formulation:

Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 0.25mM DTT, 0.1mM EGTA, 0.1mM EDTA, 0.1mM PMSF, 25% glycerol.

Purity & Molecular Weight:

The purity was determined to be >80% by densitometry. Approx. MW 110kDa.



Storage:

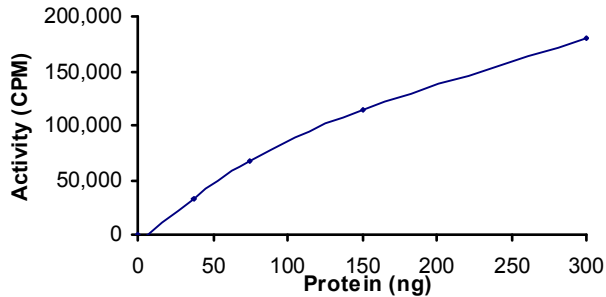
Store product at -70°C . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

Stability:

Unopened vial at -70°C , 1 year from date of shipment.

**Specific Activity:**

The specific activity was determined to be 34 nmol/min/mg as per Activity Assay Protocol.

**Activity Assay Protocol:**

Assay activity of the kinase in a 25 μ L reaction consisting of 5 μ L of 5 X Kinase Assay Buffer, 10 μ L of 1 mg/ml the Substrate Solution, 5 μ L of diluted kinase and 5 μ L of 250 μ M ATP solution containing [γ - 32 P] ATP (0.167 μ Ci/ μ L). Start the reaction by adding the ATP solution. Incubate for 15 minutes at 30°C. Terminate the reaction by spotting 20 μ L of the reaction mixture onto phosphocellulose P81 paper. Air-dry the P81 paper and sequentially wash 4 times for approximately 10 minutes each in 1% phosphoric acid with constant gentle stirring. Count the P81 paper in a liquid scintillation counter.

Substrate Solution:

Poly (Glu:Try, 4:1) synthetic peptide substrate diluted in distilled H₂O to a final concentration of 1 mg/ml.

5 X Kinase Assay Buffer:

25mM MOPS, pH 7. 2, 12.5mM β -glycerol-phosphate, 20mM MgCl₂, 25mM MnCl₂, 5mM EGTA, 2mM EDTA. Add 0.25mM DTT to Kinase Assay Buffer prior to use.

References:

1. Tamagnone, L. et al: BMX, a novel nonreceptor tyrosine kinase gene of the BTK/ITK/TEC/TXK family located in chromosome Xp22.2. *Oncogene*. 1994 Dec;9(12):3683-8.
2. Saharinen, P. et al: The Bmx tyrosine kinase induces activation of the Stat signaling pathway, which is specifically inhibited by protein kinase Cdelta. *Blood*. 1997 Dec 1;90(11):4341-53

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