

p38 beta (Human), Active

Full-length recombinant protein expressed in Sf9 cells

Cat# CY-SPM36

Lot No. K361-1
5 µg 0.1 µg/µl

Background:

p38 β (p38-beta) is a member of the p38 MAP kinase family and is activated by both proinflammatory cytokines and environmental stress (1). The p38 β is activated through its phosphorylation by MAP kinase kinases (MKKs), preferably by MKK6. Transcription factor ATF2/CREB2 has been shown to be a substrate of this kinase (2). Alternatively spliced transcript variants encoding the same protein have been observed.

Product Description:

Recombinant full-length human p38 β was expressed by baculovirus in Sf9 insect cells using a N-terminal GST tag. The gene accession number is NM_002751.

Gene Aliases:

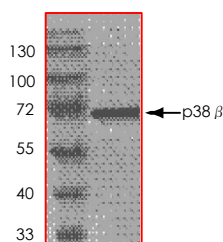
MAPK11; SAPK2; p38-2; PRKM11; SAPK2B; p38b; P38b2

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 >90% by densitometry. Approx. MW 71kDa.



Storage:

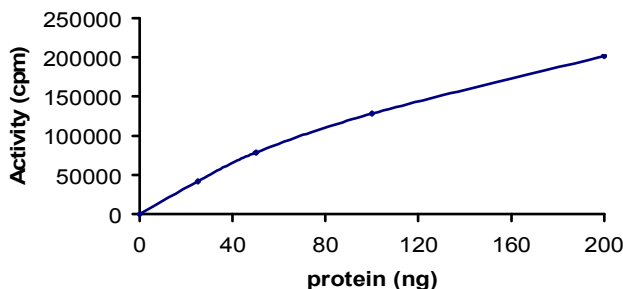
Store product at -70°C . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

Stability:

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

**Specific Activity:**

The specific activity was determined to be 123 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 0.5 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:

N-terminal GST tagged recombinant human ATF2 (1-254) prepared in buffer (50mM Tris-HCl, pH 7.2, 50mM NaCl, 5mM EDTA and 0.25mM DTT) to a final concentration of 0.5 mg/ml.

5 X Kinase Assay Buffer:

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

References:

1. Jiang, Y. et al: Characterization of the structure and function of a new mitogen-activated protein kinase (p38-beta). J. Biol. Chem. 271: 17920-17926, 1996.
2. Stein, B. et al: p38-2, a novel mitogen-activated protein kinase with distinct properties. J. Biol. Chem. 272: 19509-19517, 1997.

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