Human p38 delta / MAPK13 Protein (Activated in vitro, GST Tag)

Catalog Number: **10747-H09B-A**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

MAPK-13; MAPK13; p38delta; PRKM13; SAPK4

Protein Construction:

A DNA sequence encoding the full length of human MAPK13 (O15264) (Met1-Leu365) was fused with the GST tag at the N-terminus. Activated in vitro by MAP2K6 (10422-H20B1).

Source: Human

Expression Host: Baculovirus-Insect cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

The specific activity was determined to be ＞30 nmol/min/mg using MBP as substrate.

Endotoxin:

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

Stability:

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

Predicted N terminal: Met

Molecular Mass:

The recombinant human MAPK13/GST chimera consists of 589 amino acids and predicts a molecular mass of 68.4 kDa. It migrates as an approximately 63.9 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Supplied as sterile 50 mM Tris-HCl, 150 mM NaCl, 0.25 mM DTT, 0.1 mM EDTA, 0.1 mM PMSF, 25 % glycerol, pH 7.5.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

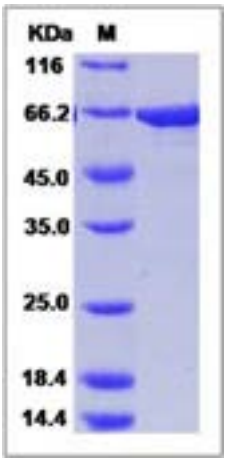
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

The p38 family of mitogen-activated protein kinases (MAPK) includes p38 alpha (SAPK2a, CSBP), p38 beta (SAPK2b), p38 delta (SAPK4), and p38 gamma (SAPK3/ERK6). p38 alpha and p38 beta are widely expressed p38 isoforms that are involved in regulation of cell proliferation, differentiation, development, and response to stress. p38 delta, also known as MAPK13, is a regulator of differentiation-dependent gene expression in keratinocytes, and been as a regulator of surface epithelia differentiation and apoptosis. p38 delta protein is upregulated in Cholangiocarcinoma (CC) relative to hepatocellularcarcinoma (HCC) and to normal biliary tract tissues. p38 delta is important for motility and invasion of CC cells, suggesting that p38 delta may play an important role in CC metastasis. p38 delta is expressed in the epidermis, suggesting a role for p38 delta in regulating differentiation. p38 delta is the major p38 isoform driving suprabasal involucrin gene expression and that p38 delta directly regulates ERK1/2 activity via formation of a p38 delta-ERK1/2 complex. Recent emerging evidence suggests that the p38 stress MAPK pathway may function as a tumor suppressor through regulating Ras-dependent and -independent proliferation, transformation, invasion and cell death by isoform-specific mechanisms. p38 delta has important role in promoting cell proliferation and tumor development in epidermis and may have therapeutic implication for skin cancer.

References

1.Efimova T, *et al.* (2003) A regulatory role for p38 delta MAPK in keratinocyte differentiation. Evidence for p38 delta-ERK1/2 complex formation. J Biol Chem. 278(36): 34277-85. 2.Eckert RL, *et al.* (2003) p38 Mitogen-activated protein kinases on the body surface--a function for p38 delta. J Invest Dermatol. 120(5): 823-8. 3.Loesch M, *et al.* (2008) The p38 MAPK stress pathway as a tumor suppressor or more? Front Biosci. 13: 3581-93.