Human DUSP14 / MKP-6 Protein (His & MBP Tag)

Catalog Number: **12443-H10E**

General Information

Gene Name Synonym:

MKP-L; MKP6

Protein Construction:

A DNA sequence encoding the human DUSP14 (O95147) (Met 1 –His 191) was fused with an N-terminal polyhistidine-tagged MBP tag at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 88 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

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

Predicted N terminal: Met

Molecular Mass:

The recombinant human DUSP14/MBP fusion protein consists of 587 amino acids and has a calculated molecular mass of 65 kDa. It migrates as an approximately 60 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, 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:

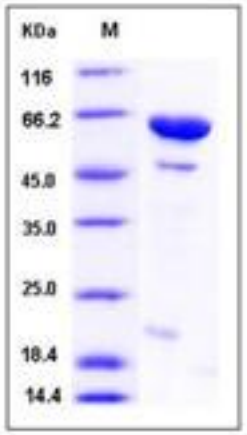
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Dual specific phosphatase 14 / MAP-kinase phophatase-6 (DUSP14 / MKP6) is a member of Dual-specificity phosphatases that is a subclass of protein tyrosine phosphatases (PTP) families that can dephosphorylate bothe phosphotyrosine and phosphoserine / phosphothreonine residues in substrates. Unlike many other DUSPs, DUSP14 only contains a catalytic domain within the C-terminal region. In signal transduction, DUSP14 has been considered as negative regulator of the mitogen-activated protein kinase (MAPK) / extracellular signal-regulated kinase 1 / 2 (ERK 1 / 2) pathway. DUSP14 phosphatase activity has been confirmed to be inhibited by PTP inhibitor Ⅳ. PTP inhibitor binds to the catalytic site of DUSP14. PTP inhibitor Ⅳ effectively and specifically inhibited DUSP14-mediated dephosphorylation of JNK, a member of the mitogen-activated protein kinase (MAPK) family through dephosphorylation of both the Ser / Thr and Tyr residues of MAPKs.

References

1.Yoshihara Y, *et al*. (1996) Overlapping and differential expression of BIG-2, BIG-1, TAG-1, and F3: four members of an axon-associated cell adhesion molecule subgroup of the immunoglobulin superfamily. J Neurobiol. 28 (1): 51-69. 2.Klinger S, *et al*. (2008) Increasing GLP-1-induced beta-cell proliferation by silencing the negative regulators of signaling cAMP response element modulator-alpha and DUSP14. Diabetes. 57 (3): 584-93. 3.Park JE, *et al*. (2009) PTP inhibitor IV protects JNK kinase activity by inhibiting dual-specificity phosphatase 14 (DUSP14). Biochem Biophys Res Commun. 387 (4): 795-9.