



LD Biopharma, Inc.
9924 Mesa Rim Road Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human MAPKAPK3 Protein
Catalog Number: hRP-0874
Manufacturer: LD Biopharma, Inc.

Introduction

Human MAP kinase-activated protein kinase 3 (MAPKAPK3) gene encodes a member of the Ser/Thr protein kinase family. This kinase was shown to be activated by growth inducers and stress stimulation of cells. In vitro studies demonstrated that ERK, p38 MAP kinase and Jun N-terminal kinase were all able to phosphorylate and activate this kinase, which suggested the role of this kinase as an integrative element of signaling in both mitogen and stress responses. This kinase was reported to interact with, phosphorylate and repress the activity of E47, which is a basic helix-loop-helix transcription factor known to be involved in the regulation of tissue-specific gene expression and cell differentiation.

Full-length human MAPKAPK3 (382 aa) gene was constructed with 15 aa N-terminal T7 tag and expressed in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

| | | |
|--------------------------|--|-----------------------|
| Gene Symbol: | MAPKAPK3 | (3pK; MK-3; MAPKA-K3) |
| Accession Number: | NP_004626 | |
| Species: | Human | |
| Size: | 50 µg / Vial | |
| Composition: | 0.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol. | |
| Storage: | In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days. | |

Key References

Cheng,R., et al., *High-resolution crystal structure of human Mapkap kinase 3 in complex with a high affinity ligand*. Protein Sci. 19 (1), 168-173 (2010)



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Ludwig,S., et al., *3pK, a novel mitogen-activated protein (MAP) kinase-activated protein kinase, is targeted by three MAP kinase pathways*. Mol. Cell. Biol. 16 (12), 6687-6697 (1996)

Applications

1. May be used for in vitro ERK/p38 signal pathway regulation study with ProFectin based intracellular protein delivery of this protein.
2. As soluble / native protein, may be used as enzymatic substrate protein for kinase or ubiquitin assay development.
3. May be used for mapping MAPKAPK3 protein-protein interaction.
4. May be used as antigen for specific antibody development.

Quality Control

1. Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGEFMDGETAEEQGGPVPPPVAPGGPGLGGAPGGRREPKKYAVTDDYQLSKQV
LGLGVNGKVLECFHRRTGQKCALKLLYDSPKARQEVDDHHWQASGGPHIVCILDVYENMHHGKRC
LLIIMECMEGGELFSRIQERGDQAFTEREAAEIMRDIGTAIQFLHSHNIAHRDVKPENLLYTSK
EKDAVLKLTDFGFAKETTONALQTPCYTPYYVAPEVLGPEKYDKSCDMWSLGVIMYILLCGFPP
FYSNTGQAISPGMKRRIRLGQYGFNPPEWSEVEDAKQLIRLLLKTDPETERLTITQFMNHPWIN
QSMVVPQTPLHTARVLQEDKDHWDDEVKEEMTSALATMRVDYDQVKIKDLKTSNNRLLNKRRKKQ
AGSSSASQGCNNQ