#### **Product Datasheet**

# Recombinant Human Dual specificity mitogen-activated protein kinase kinase 6(MAP2K6)

Catalog No: #AP70525

Package Size: #AP70525-1 20ug #AP70525-2 100ug #AP70525-3 1mg



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## Description

Recombinant Human Dual specificity mitogen-activated protein kinase kinase 6(MAP2K6)
E.coli
Greater than 90% as determined by SDS-PAGE.
Expression Region:1-334aaSequence Info:Full Length
MAPK,ERK kinase 6 ;MEK 6Stress-activated protein kinase kinase 3 ;SAPK kinase 3 ;SAPKK-3 ;SAPKK3
P52564
53.5 kDa
N-terminal 6xHis-SUMO-tagged
${\tt MSQSKGKKRNPGLKIPKEAFEQPQTSSTPPRDLDSKACISIGNQNFEVKADDLEPIMELGRGAYGVVEKMRHV}$
PSGQIMAVKRIRATVNSQEQKRLLMDLDISMRTVDCPFTVTFYGALFREGDVWICMELMDTSLDKFYKQVIDK
GQTIPEDILGKIAVSIVKALEHLHSKLSVIHRDVKPSNVLINALGQVKMCDFGISGYLVDSVAKTIDAGCKPYMAP
ERINPELNQKGYSVKSDIWSLGITMIELAILRFPYDSWGTPFQQLKQVVEEPSPQLPADKFSAEFVDFTSQCLK
KNSKERPTYPELMQHPFFTLHESKGTDVASFVKLILGD
Tris-based buffer50% glycerol
The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability
of the protein itself.
Generally, the shelf life of liquid form is 6 months at -20°C,-80°C. The shelf life of lyophilized form is 12 months
at -20°C,-80°C.Notes:Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for
up to one week.

## Background

Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. With MAP3K3,MKK3, catalyzes the concomitant phosphorylation of a threonine and a tyrosine residue in the MAP kinases p38 MAPK11, MAPK12, MAPK13 and MAPK14 and plays an important role in the regulation of cellular responses to cytokines and all kinds of stresses. Especially, MAP2K3,MKK3 and MAP2K6,MKK6 are both essential for the activation of MAPK11 and MAPK13 induced by environmental stress, whereas MAP2K6,MKK6 is the major MAPK11 activator in response to TNF. MAP2K6,MKK6 also phosphorylates and activates PAK6. The p38 MAP kinase signal transduction pathway leads to direct activation of transcription factors. Nuclear targets of p38 MAP kinase include the transcription factors ATF2 and ELK1. Within the p38 MAPK signal transduction pathway, MAP3K6,MKK6 mediates phosphorylation of STAT4 through MAPK14 activation, and is therefore required for STAT4 activation and STAT4-regulated gene expression in response to IL-12 stimulation. The pathway is also crucial for IL-6-induced SOCS3 expression and down-regulation of IL-6-mediated gene induction; and for IFNG-dependent gene transcription. Has a role in osteoclast differentiation through NF-kappa-B transactivation by TNFSF11, and in endochondral ossification and since SOX9 is another likely downstream target of the p38 MAPK pathway. MAP2K6,MKK6 mediates apoptotic cell death in thymocytes. Acts also as a regulator for melanocytes dendricity, through the modulation of Rho family GTPases

### References

Initial characterization of the human central proteome. Burkard T.R., Planyavsky M., Kaupe I., Breitwieser F.P., Buerckstuemmer T., Bennett K.L.,

Note: This product is for in vitro research use only and is not intended for use in humans or animals.