



BACKGROUND

Lipopolysaccharide was shown to induce tyrosine phosphorylation of a unique 38 kDa protein, which was designated p38. p38 is a member of the MAP kinase family with features most closely resembling those of the *Saccharomyces cerevisiae* protein HOG1. p38 and HOG1 share a TGY phosphorylation sequence, whereas most other MAP kinase family proteins have a TEY sequence. A related protein, p38b, was shown to phosphorylate ATF-2 at a 20-fold higher rate than p38, suggesting distinct substrate preferences. Stress activated protein kinase-4, or SAPK4, also designated p38d, is a related protein that is phosphorylated by MKK6 in response to cytokines and cellular stresses

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SOURCE

p38 is expressed in *E. coli* as a 67 kDa, GST-tagged fusion protein of human origin.

PRODUCT

p38 is purified from bacterial lysates (> 98%); supplied as 50 μ g purified protein.

APPLICATIONS

p38 is suitable as a substrate for MKK6: sc-4821.

RECONSTITUTION

In order to avoid freeze/thaw damaging of the active protein, dilute protein when first used to desired working concentration. Either a sterile filtered standard buffer (such as 50mM TRIS or 1X PBS) or water, can be used for the dilution. Store any thawed aliquot in refrigeration at 2° C to 8° C for up to four weeks, and any frozen aliquot at -20° C to -80° C for up to one year. It is recommended that frozen aliquots be given an amount of standard cryopreservative (such as Ethylene Glycol or Glycerol 5-20% v/v), and refrigerated samples be given an amount of carrier protein (such as heat inactivated FBS or BSA to 0.1% v/v) or non-ionic detergent (such as Triton X-100 or Tween 20 to 0.005% v/v), to aid stability during storage.

SELECT PRODUCT CITATIONS

- Malfa, G.A., Tomasello, B., Sinatra, F., Villaggio, G., Amenta, F., Avola, R. and Renis, M. 2014. "Reactive" response evaluation of primary human astrocytes after methylmercury exposure. *J. Neurosci. Res.* 92: 95-103.
- Liu, W., Wang, J., Wang, L., Qian, C., Qian, Y., Xuan, H., Zhuo, W., Li, X., Yu, J. and Si, J. 2016. Ras-association domain family 10 acts as a novel tumor suppressor through modulating MMP2 in hepatocarcinoma. *Oncogenesis* 5: e237.

STORAGE

Store desiccated at -20° C; stable for one year from the date of shipment.

RESEARCH USE

For research use only, not for use in diagnostic procedures.