

## Recombinant Human MAPK14 protein (His Tag)

**Catalog Number:** PDEH101046

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

### Description

<b>Species</b>	Human
<b>Source</b>	E.coli-derived Human MAPK14 protein Met1-Ala300, with an N-terminal His & C-terminal His
<b>Calculated MW</b>	32.9 kDa
<b>Observed MW</b>	32 kDa
<b>Accession</b>	Q16539
<b>Bio-activity</b>	Not validated for activity

### Properties

<b>Purity</b>	> 95% as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 10 EU/mg of the protein as determined by the LAL method
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 °C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
<b>Reconstitution</b>	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis.

### Background

The p38 Mitogen-activated Protein Kinases (MAPKs) are a family of four related Ser/Thr kinases activated by proinflammatory cytokines and environmental stresses, such as UV irradiation and heat shock. Stress signals are delivered to this cascade by members of small GTPases of the Rho family (Rac, Rho, Cdc42). p38 MAPK is involved in the regulation of Hsp27 and MAPKAP-2 and several transcription factors including ATF2, STAT1, and indirectly CREB via activation of MSK1. The p38 MAPK protein also plays a role in cell differentiation, autophagy and apoptosis. Mkk3 and SEK can activate p38 MAPK by phosphorylation at Thr180 and Tyr182, which in turn activates the MAPKAP kinase 2 and regulating phosphorylation of ATF2, Mac and MEF2.

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