protein kinase MEK2 or MAP Kinase Kinase (MAPKK) (1–4).

Recognition Determinants: The minimal recognition motif for phosphorylation by MAPK is S/TP. Pro is also common at the -2 position in the optimal primary motif PXS/TP. The substrate specificity of MAPK overlaps with other proline-directed protein kinases present within the cell. This suggests that the recognition of protein substrates may require structural determinants in addition to primary sequence requirements (5).

Source: Isolated from a strain of E. coli that carries a clone expressing murine MAPK (1) under the control of a T7 expression system. Fully active MAPK is produced by co-expression with a constitutively active form of its activator, MEK2 (6).

Supplied in: 100 mM NaCl, 50 mM HEPES (pH 7.5 @ 25°C), 0.1 mM EDTA, 1 mM DTT, 0.01% Brij 35 and 50% glycerol.

Reagents Supplied with Enzyme: 10X NEBuffer for Protein Kinases (PK).

Protein Kinase, MAPK (MAPK), also known as Erk2 (Extracellular signal-regulated kinase 2) is one of two isoforms of MAP kinase family. It is a serine/threonine protein kinase, participating in mammalian signal transduction pathways that control intracellular responses to hormones and major developmental changes. Full activation of p42 MAP Kinase requires phosphorylation at residues T183 and Y185 catalyzed by the upstream protein kinase MEK2 or MAP Kinase Kinase (MAPKK) (1–4).

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1. **1X NEBuffer for PK:** 50 mM Tris-HCl 10 mM MgCl₂ 0.1 mM EDTA 2 mM DTT 0.01% Brij 35 pH 7.5 @ 25°C

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1. **1X NEBuffer for PK:** 50 mM Tris-HCl 10 mM MgCl₂ 0.1 mM EDTA 2 mM DTT 0.01% Brij 35 pH 7.5 @ 25°C
Heat Inactivation: 65°C for 20 minutes.

Notes On Use: Avoid freeze/thaw cycles. Can be stored for 2 weeks or less at –20°C.

References: