丝裂原活化蛋白激酶激酶 4 抗体

产品货号： mlR1977

英文名称： MEK4

中文名称： 丝裂原活化蛋白激酶激酶 4 抗体

别　　名： c Jun N terminal kinase kinase 1; c-Jun N-terminal kinase kinase 1; c-Jun N-terminal kinase kinase 1; Dual specificity mitogen activated protein kinase kinase 4; Dual specificity mitogen activated protein kinase kinase 4; Dual specificity mitogen-activated protein kinase kinase 4; JNK activated kinase 1; JNK Activated Kinase 1; JNK activating kinase 1; JNK activating kinase 1; JNK-activating kinase 1; JNKK 1; JNKK; JNKK; JNKK-1; JNKK-1; JNKK1; JNKK1; MAP kinase kinase 4; MAP kinase kinase 4; MAP2K4; MAPK / ERK kinase 4; MAPK / ERK kinase 4; MAPK ERK kinase 4; MAPK/ERK kinase 4; MAPKK 4; MAPKK 4; MAPKK-4; MAPKK-4; MAPKK4; MAPKK4; MEK 4; MEK 4; MEK-4; MEK-4; MEK4; Mitogen Activated Protein Kinase Kinase 4; MKK 4; MKK-4; MKK-4; MKK4; MP2K4_HUMAN; PRKMK 4; PRKMK 4; PRKMK-4; PRKMK-4; PRKMK4; PRKMK4; SAPK / ERK kinase 1; SAPK / ERK kinase 1; SAPK ERK kinase 1; SAPK/ERK Kinase 1; SEK 1; SEK1; SEK1; SERK 1; SERK-1; SERK-1; SERK1; SERK1.

研究领域： 肿瘤　细胞生物　免疫学　信号转导　转录调节因子　激酶和磷酸酶

抗体来源： Rabbit

克隆类型： Polyclonal

交叉反应：　Human, Mouse, Rat, Dog, Cow,

产品应用： ELISA=1:500-1000 IHC-P=1:400-800 IHC-F=1:400-800 IF=1:100-500 （石蜡切片需做抗原修复）
not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

分 子 量： 44kDa

细胞定位： 细胞核

性　　状： Lyophilized or Liquid

浓　　度： 1mg/ml

免 疫 原： KLH conjugated synthetic peptide derived from human MKK4/MAP2K4:301-399/399

亚　　型： IgG

纯化方法： affinity purified by Protein A

储 存 液： 0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.

保存条件： Store at -20 ° C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20° C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ° C.

PubMed： PubMed

产品介绍： This gene encodes a member of the mitogen-activated protein kinase (MAPK) family. Members of this family act as an integration point for multiple biochemical signals and are involved in a wide variety of cellular processes such as proliferation, differentiation, transcription regulation, and development. They form a three-tiered signaling module composed of MAPKKKs, MAPKKs, and MAPKs. This protein is phosphorylated at serine and threonine residues by MAPKKKs and subsequently phosphorylates downstream MAPK targets at threonine and tyrosine residues. A similar protein in mouse has been reported to play a role in liver organogenesis. A pseudogene of this gene is located on the long arm of chromosome X. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2013]

Function:

Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Essential component of the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling pathway. With MAP2K7/MKK7, is the one of the only known kinase to directly activate the stress-activated protein kinase/c-Jun N-terminal kinases MAPK8/JNK1, MAPK9/JNK2 and MAPK10/JNK3. MAP2K4/MKK4 and MAP2K7/MKK7 both activate the JNKs by phosphorylation, but they differ in their preference for the phosphorylation site in the Thr-Pro-Tyr motif. MAP2K4 shows preference for phosphorylation of the Tyr residue

and MAP2K7/MKK7 for the Thr residue. The phosphorylation of the Thr residue by MAP2K7/MKK7 seems to be the prerequisite for JNK activation at least in response to proinflammatory cytokines, while other stimuli activate both MAP2K4/MKK4 and MAP2K7/MKK7 which synergistically phosphorylate JNKs. MAP2K4 is required for maintaining peripheral lymphoid homeostasis. The MKK/JNK signaling pathway is also involved in mitochondrial death signaling pathway, including the release cytochrome c, leading to apoptosis. Whereas MAP2K7/MKK7 exclusively activates JNKs, MAP2K4/MKK4 additionally activates the p38 MAPKs MAPK11, MAPK12, MAPK13 and MAPK14.

Subunit:

Interacts with SPAG9 (By similarity). Interacts (via its D domain) with its substrates MAPK8/JNK1, MAPK9/JNK2, MAPK10/JNK3, MAPK11 and MAPK14. Interacts (via its DVD domain) with MAP3Ks activators like MAP3K1/MEKK1 and MAP3K11/MLK3. Interacts with ARRB1, ARRB2 and MAPK8IP3/JIP3.

Subcellular Location:

Cytoplasm. Nucleus.

Tissue Specificity:

Abundant expression is seen in the skeletal muscle. It is also widely expressed in other tissues.

Post-translational modifications:

Activated by phosphorylation on Ser-257 and Thr-261 by MAP kinase kinase kinases (MAP3Ks).

Similarity:

Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. MAP kinase kinase subfamily.

Contains 1 protein kinase domain.

SWISS:

P45985

Gene ID:

6416

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

研究发现---丝裂原活化蛋白激酶激酶 4（MKK4）信号途径对肝脏再生具有重要的意义

肝脏是人体最大的内脏器官，承担着数百种功能，包括产生蛋白质与凝血因子，以及促进消化与能量释放等。肝功能衰竭（Liver Failure）是由于肝细胞受到广泛严重的损害，机体代谢功能发生严重紊乱而出现的临床综合征。肝衰竭发生于许多严重的肝脏疾病过程中，症候险恶，预后多不良。

近日，俄勒冈健康与科学大学，加州大学旧金山分校的研究人员介绍了近期一项可用于治疗肝功能衰竭的新成果：研究人员发现了著名信号途径 JNK 中的一种激酶——丝裂原活化蛋白激酶激酶 4（MKK4）对肝脏再生具有重要的意义。相关文章刊登在了近期出版的《细胞》（Cell）杂志上。

研究显示肝细胞质量是通过肝细胞死亡和再生之间的平衡来维系的，急性和慢性肝功能损伤会失去这种再生能力。因此围绕肝脏再生，科学家们展开了许多研究。在这篇文章中，研究人员发现了一种潜在的药物靶标，能增强肝细胞增殖，促进肝脏再生，防止肝功能衰竭。

研究人员研发了一种能有效筛选动物疾病模型中调控肝脏再生基因的方法，他们在对小鼠肝脏中数百个基因的表达进行干扰分析后，发现在急性和慢性肝损伤后，抑制 MKK4 基因能有效增加肝细胞的生成和生存，从而促进肝脏修复，增加小鼠的寿命。而且这种 MKK4 基因的抑制，也会提高培养基中肝细胞长时间存活的数量，这为促进肝病患者肝移植提供了一种新方法。

研究人员表示，这一成果指出 MKK4 也许能作为一种促进肝细胞增殖，肝脏再生的药物靶标，这为研发新型肝病治疗方法提出了新思路。

此前，这组研究人员通过观察成体干细胞标记物 Lgr5，以及响应生长因子 Wnt 的细胞生长，第一次鉴别出了小肠和结肠中的干细胞。并推测，Lgr5 的独特表达模式也可以用于标记其他成体组织，包括肝脏中的干细胞。并在这一方法的基础上进行了改良，利用新方法，研究人员发现 Wnt 诱导 Lgr5 表达不仅可以标记肝脏中的干细胞生成，还可以确定一种在肝损伤时变得活跃的干细胞。

研究人员希望能大规模的扩增这些肝细胞，随后将它们转化为肝细胞，用于治疗人类慢性肝病。