10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Phospho-Thr386 MEK 1 Antibody

Affinity purified rabbit polyclonal antibody
Catalog # AN1017

Specification

Phospho-Thr386 MEK 1 Antibody - Product Information

Application	**WB**
Primary Accession	Q02750
Reactivity	**Human, Rat**
Predicted	**Bovine, Chicken, Mouse, Monkey, Xenopus**
Host	**Rabbit**
Clonality	**polyclonal**
Calculated MW	**45 KDa**

Phospho-Thr386 MEK 1 Antibody - Additional Information

Gene ID	**5604**
Gene Name	**MAP2K1**

Other Names
Dual specificity mitogen-activated protein kinase kinase 1, MAP kinase kinase 1, MAPKK 1, MKK1, ERK activator kinase 1, MAPK/ERK kinase 1, MEK 1, MAP2K1, MEK1, PRKMK1

Target/Specificity
Synthetic phospho-peptide corresponding to amino acid residues surrounding Thr386 conjugated to KLH.

Dilution
WB~~ 1:1000

Format
Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

Antibody Specificity
Specific for the ~45k MEK 1 protein phosphorylated at Thr386. The immunolabeling is completely eliminated by treatment with λ-phosphatase.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Phospho-Thr386 MEK 1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping
Blue Ice

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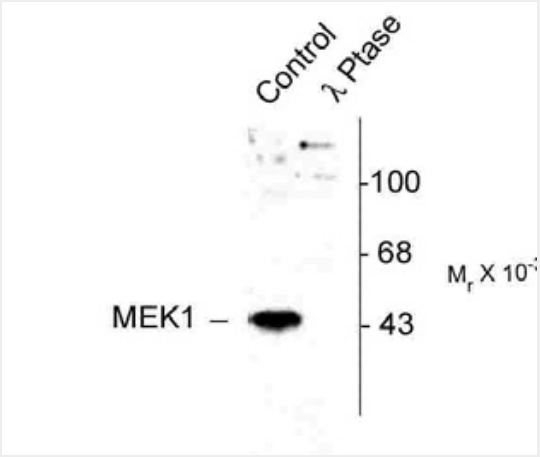
Phospho-Thr386 MEK 1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Phospho-Thr386 MEK 1 Antibody - Images



Western blot of human T47D cells showing specific immunolabeling of the ~45kMEK 1 (Control). The phosphospecificity of this labeling is shown in the second lane(lambda phosphatase: λ Ptase) The blot is identical to the control except that it wasincubated in λ Ptase (1200 units for 30 min) before being exposed to the MEK 1Thr386 antibody. The immunolabeling of MEK 1 is completely eliminated by λ Ptase.

Phospho-Thr386 MEK 1 Antibody - Background

MEK 1 (MAP Kinase Kinase, also known as MKK) is an integral component of the MAP kinase cascade that regulates cell growth and differentiation (Ahn, 1993; Chong et al., 2003). This pathway also plays a key role in synaptic plasticity in the brain (Adams and Sweatt, 2002). Activated MEK 1 acts as a dual specificity kinase phosphorylating both a threonine and a tyrosine residue on MAP kinase (Kyriakis et al., 1991; Seger et al., 1991; Crews et al., 1992). Conversely, there also appears to be a feedback phosphorylation of MEK 1 by MAP kinase. The sites on MEK 1 that are phosphorylated by MAP kinase are Thr292 and Thr386 (Mansour et al., 1994).

Phospho-Thr386 MEK 1 Antibody - References

Adams JP, Sweatt JD (2002) Molecular psychology: Roles for the ERK MAP kinase cascade in memory. Annu Rev Pharmacol Toxicol 42:135-163.
Ahn NG (1993) The MAP kinase cascade. Discovery of a new signal transduction pathway. Mol Cell Biochem 127-128:201-209.
Chong H, Vikis HG, Guan KL (2003) Mechanisms of regulating the Raf kinase family. Cellular Signalling 15:463-469.
Crews CM, Alessandrini A, Erikson RL (1992) The primary structure of MEK, a protein kinase that phosphorylates the ERK gene product. Science 258:478-480.

Kyriakis JM, Brautigan DL, Ingebritsen TS, Avruch J (1991) pp54 Microtubule-associated protein-2 kinase requires both tyrosine and serine/threonine phosphorylation for activity. J Biol Chem 266:10043-10046.
Mansour SJ, Resing KA, Candi JM, Hermann AS, Gloor JW, Herskind KR, Wartmann M, Davis RJ, Ahn NG (1994) Mitogen-activated protein (MAP) kinase phosphorylation of MAP kinase kinase: Determination of phosphorylation sites by mass spectrometry and site-directed mutagenesis. J Biochem (Tokyo) 116:304-314.
Seger R, Ahn NG, Boulton TG, Yancopoulos GD, Panayotatos N, Radziejewska E, Ericsson L, Bratlien RL, Cobb MH, Krebs EG (1991) Microtubule-associated protein 2 kinases, ERK1 and ERK2, undergo autophos-phorylation on both tyrosine and threonine residues: Implications for their mechanism of activation. Proc Natl Acad Sci USA 88:6142-6146.