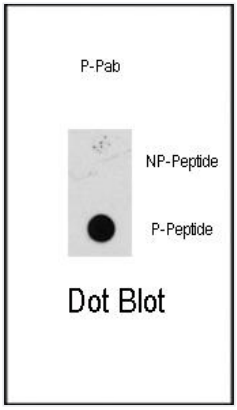
MEK1 Antibody – Rabbit Polyclonal

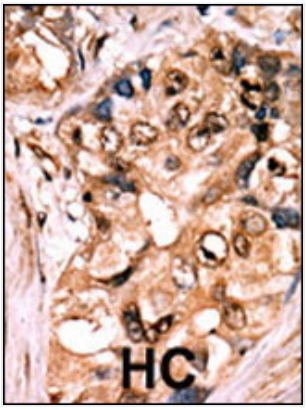
PRODUCT OVERVIEW

Product Name	MEK1, Polyclonal Antibody
Full Product Name	MEK1, Phosphorylated (Ser217, Ser221) (MAPK/ERK Kinase 1, MEK 1, Dual Specificity Mitogen-Activated Protein Kinase Kinase 1, MAP Kinase Kinase 1, MAP2K1, MAPKK 1, MKK1, PRKMK1, ERK Activator Kinase 1) (APC)
Product Gene Name	anti-MEK1 antibody
Product Synonym Names	Mitogen-activated Protein Kinase Kinase 1; EC=2.7.12.2
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Allophycocyanin (APC).
Purity/Purification	Purified by Immunoaffinity chromatography.
Specificity	Recognizes human MEK1 when phosphorylated at Ser217 and Ser221.
Preparation and Storage	May be stored at 4 degree C for short-term only. Aliquot to avoid repeated freezing and thawing. Do not freeze APC conjugates. Light sensitive. Aliquots are stable for at least 6 months. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.
Molecular Weight	Predicted: 43 kDa Observed: 44 kDa
OMIM	115150
3D Structure	ModBase 3D Structure for Q02750
Immunogen	Synthetic phosphopeptide corresponding to amino acid residues surrounding Ser217/221 of human MEK1 (KLH).
Conjugate	APC
Antigen Modification	Phosphorylated
Note	Preservative Free
Special Handling	Light sensitive
Product Categories/Family for anti-MEK1 antibody	Antibodies; Protein Kinases
Applications Tested/Suitable for anti-MEK1 antibody	Immunohistochemistry (IHC), FLISA, Western Blot (WB)
Application Notes for anti-MEK1 antibody	IHC: 1:50-1:100 FLISA: 1:1,000 WB: 1:100-1:500 Applications are based on unconjugated antibody.
Related Product Information for anti-MEK1 antibody	MBS6487547 is an antibody targeting MEK1. Also known as MEK1, Phosphorylated (Ser217, Ser221) (MAPK/ERK Kinase 1, MEK 1, Dual Specificity Mitogen-Activated Protein Kinase Kinase 1, MAP Kinase Kinase 1, MAP2K1, MAPKK 1, MKK1, PRKMK1, ERK Activator Kinase 1) (APC). Reactive in Human. Host: Rabbit.

Product References and Citations for anti-MEK1 antibody	1. Ohren, J.F., et al., J. Neural Transm. 11(12):1192-1197 (2004). 2. Naegele, S., et al., J. Biol. Chem. 279(44):46023-46034 (2004). 3. Ussar, S., et al., J. Biol. Chem. 279(42):43861-43869 (2004). 4. Beausoleil, S.A., et al., Proc. Natl. Acad. Sci. USA 101(33):12130-12135 (2004). 5. Spence, H.J., et al., EMBO Rep. 5(5):484-489 (2004).
Other Notes	Small volumes of anti-MEK1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



Dot Blot (DB) of anti-MEK1 antibody
Dot blot analysis of anti-Phospho-MEK1 Pab on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.



Immunohistochemistry (IHC) of anti-MEK1 antibody
Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for MEK1. It may not necessarily be applicable to this product.

NCBI GI #	5579478
NCBI GeneID	5604
NCBI Accession #	NP_002746
UniProt Primary Accession #	Q02750
UniProt Secondary Accession #	F2Z4G4
UniProt Related Accession #	Q02750
GenBank Nucleotide #	NM_002755.3
NCBI Official Full Name	dual specificity mitogen-activated protein kinase kinase 1
NCBI Official Synonym Full Names	mitogen-activated protein kinase kinase 1
NCBI Official Symbol	MAP2K1
NCBI Official Synonym Symbols	CFC3; MEK1; MKK1; MAPKK1; PRKMK1
UniProt Protein Name	Dual specificity mitogen-activated protein kinase kinase 1
UniProt Synonym Protein Names	ERK activator kinase 1; MAPK/ERK kinase 1
Protein Family	Meiosis-specific serine/threonine-protein kinase
UniProt Gene Name	MAP2K1
UniProt Synonym Gene Names	MEK1; PRKMK1; MAP kinase kinase 1; MAPKK 1; MKK1; MEK 1
UniProt Entry Name	MP2K1_HUMAN
NCBI Protein Information	dual specificity mitogen-activated protein kinase kinase 1

NCBI Summary for MEK1	The protein encoded by this gene is a member of the dual specificity protein kinase family, which acts as a mitogen-activated protein (MAP) kinase kinase. MAP kinases, also known as extracellular signal-regulated kinases (ERKs), act as an integration point for multiple biochemical signals. This protein kinase lies upstream of MAP kinases and stimulates the enzymatic activity of MAP kinases upon wide variety of extra- and intracellular signals. As an essential component of MAP kinase signal transduction pathway, this kinase is involved in many cellular processes such as proliferation, differentiation, transcription regulation and development. [provided by RefSeq, Jul 2008]
UniProt Comments for MEK1	MEK1: a dual-specificity protein kinase of the STE7 kinase family. Phosphorylated and activated by Raf, Mos and Cot kinases. Phosphorylates a Thr and a Tyr residue in a Thr-Glu-Tyr sequence located in the activation loop of ERK1 and ERK2. An essential component of MAP kinase signal transduction pathways involved in many cellular processes such as proliferation, differentiation, transcription regulation and development. Protein type: Protein kinase, STE; Protein kinase, dual-specificity (non-receptor); EC 2.7.12.2; Kinase, protein; STE group; STE7 family Chromosomal Location of Human Ortholog: 15q22.1-q22.33 Cellular Component: dendrite cytoplasm; Golgi apparatus; microtubule; focal adhesion; mitochondrion; endoplasmic reticulum; early endosome; perikaryon; cell cortex; cytosol; axon; perinuclear region of cytoplasm; cytoplasm; late endosome; plasma membrane; microtubule organizing center; nucleus Molecular Function: MAP kinase kinase activity; protein serine/threonine kinase activity; protein serine/threonine kinase activator activity; protein binding; Ras GTPase binding; receptor signaling protein tyrosine phosphatase activity; protein-tyrosine kinase activity; protein serine/threonine/tyrosine kinase activity; mitogen-activated protein kinase kinase kinase binding; ATP binding; protein kinase activity Biological Process: axon guidance; peptidyl-tyrosine phosphorylation; activation of MAPKK activity; nerve growth factor receptor signaling pathway; protein heterooligomerization; activation of MAPK activity; negative regulation of homotypic cell-cell adhesion; response to glucocorticoid stimulus; stress-activated MAPK cascade; cell motility involved in cell locomotion; pathogenesis; toll-like receptor 3 signaling pathway; chemotaxis; signal transduction; toll-like receptor 10 signaling pathway; neuron differentiation; toll-like receptor 5 signaling pathway; negative regulation of cell proliferation; positive regulation of RNA elongation from RNA polymerase II promoter; small GTPase mediated signal transduction; vesicle transport along microtubule; response to axon injury; cell cycle arrest; toll-like receptor 4 signaling pathway; Golgi inheritance; epidermal growth factor receptor signaling pathway; mitosis; fibroblast growth factor receptor signaling pathway; MyD88-independent toll-like receptor signaling pathway; MAPKKK cascade; melanosome transport; toll-like receptor 2 signaling pathway; MyD88-dependent toll-like receptor signaling pathway; keratinocyte differentiation; regulation of stress-activated MAPK cascade; cell proliferation; regulation of vascular smooth muscle contraction; Ras protein signal transduction; insulin receptor signaling pathway; toll-like receptor signaling pathway; innate immune response; positive regulation of Ras protein signal transduction; toll-like receptor 9 signaling pathway; response to oxidative stress; cell motility; positive regulation of cell differentiation; vascular endothelial growth factor receptor signaling pathway; positive regulation of cell migration Disease: Noonan Syndrome 1; Cardiofaciocutaneous Syndrome 3
Research Articles on MEK1	**1.** Findings establish that the convergence of 2 distinct Ras effector pathways on mammalian target of rapamycin signaling maintains neurofibromatosis type 1 mouse optic glioma growth.
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