#12671 Store at -20°C

MEK1 (D2R1O) Rabbit mAb

☑ 100 µl
(10 western blots)

Cell Signaling TECHNOLOGY®

Orders ■ 877-616-CELL (2355)
orders@cellsignal.com
Support ■ 877-678-TECH (8324)
info@cellsignal.com
Web ■ www.cellsignal.com

New 09/13

For Research Use Only. Not For Use In Diagnostic Procedures.

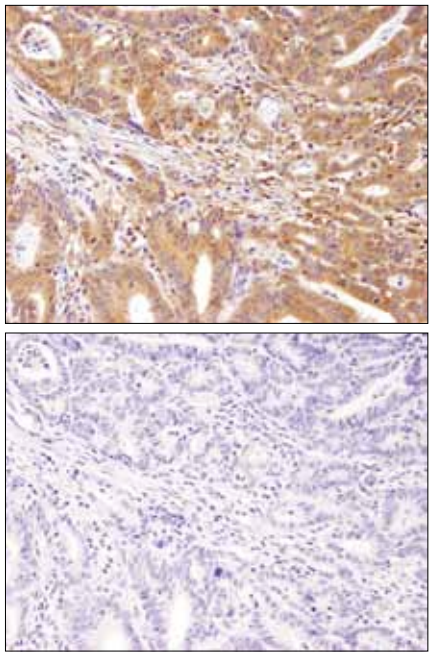
Entrez Gene ID #5604
UniProt ID #Q02750

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IHC-P Endogenous	H, M, R, Mk	45 kDa	Rabbit IgG**

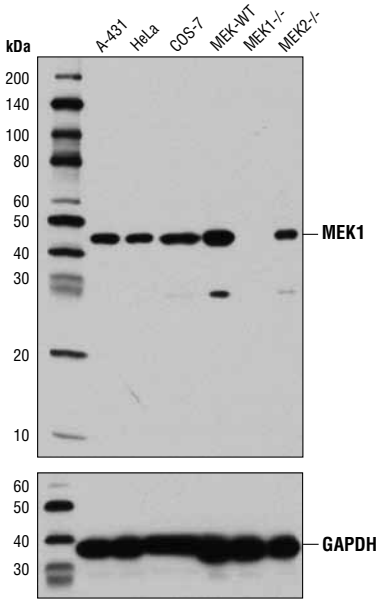
Background: MEK1 and MEK2, also called MAPK or Erk kinases, are dual-specificity protein kinases that function in a mitogen activated protein kinase cascade controlling cell growth and differentiation (1-3). Activation of MEK1 and MEK2 occurs through phosphorylation of two serine residues at positions 217 and 221, located in the activation loop of subdomain VIII, by Raf-like molecules. MEK1/2 is activated by a wide variety of growth factors and cytokines and also by membrane depolarization and calcium influx (1-4). Constitutively active forms of MEK1/2 are sufficient for the transformation of NIH/3T3 cells or the differentiation of PC-12 cells (4). MEK activates p44 and p42 MAP kinase by phosphorylating both threonine and tyrosine residues at sites located within the activation loop of kinase subdomain VIII.

Specificity/Sensitivity: MEK1 (D2R1O) Rabbit mAb recognizes endogenous levels of total MEK1 protein. This antibody does not cross-react with MEK2 or other MAPK kinase proteins.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human MEK1 protein.



Immunohistochemical analysis of paraffin-embedded colon adenocarcinoma using MEK1 (D2R1O) Rabbit mAb in the presence of control peptide (upper) or antigen specific peptide (lower).



◀ *Western blot analysis of extracts from various cell lines using MEK1 (D2R1O) Rabbit mAb (upper) or GAPDH (D16H11) XP® Rabbit mAb #5174 (lower). MEK1/2 WT (MEK-WT), MEK1 knockout (MEK1-/-) and MEK2 knockout (MEK2-/-) MEFs were generously provided by Dr. Jean Charron, Centre de recherche du Centre hospitalier de l'Université Laval, Quebec, Canada.*

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunohistochemistry (Paraffin)	1:250†
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Detection reagent:	SignalStain® Boost (HRP, Rabbit) #8114

†*Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.*

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.

Background References:

(1) Crews, C.M. et al. (1992) *Science* 258, 478-480.

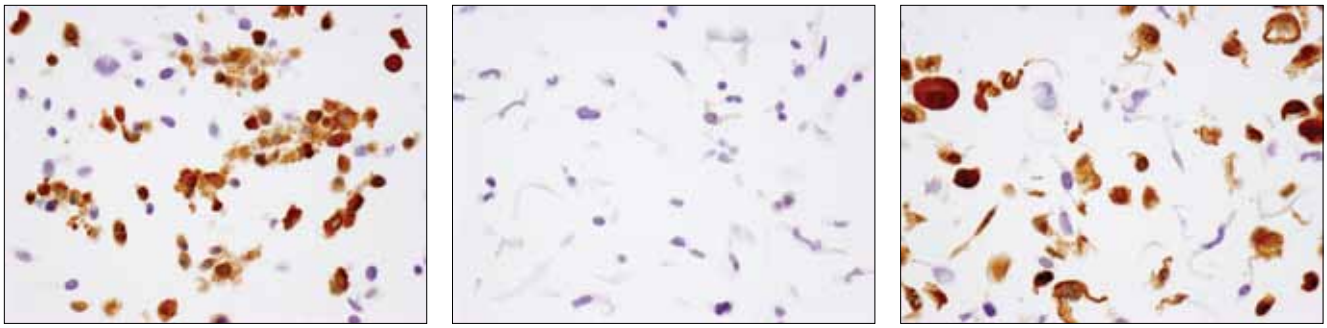
(2) Alessi, D.R. et al. (1994) *EMBO J.* 13, 1610-1619.

(3) Rosen, L.B. et al. (1994) *Neuron* 12, 1207-1221.

(4) Cowley, S. et al. (1994) *Cell* 77, 841-852.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



Immunohistochemical analysis of paraffin-embedded cell pellets, wild type MEF (left), MEK1 (-/-) MEF (middle) or MEK2 (-/-) MEF (right), using MEK1 (D2R1O) Rabbit mAb. Cells provided by Dr. Jean Charron, Centre de recherche du Centre hospitalier de l'Université Laval, Quebec, Canada.