Store at -20°C

#3372

Erk5 Antibody

☑ 100 µl
(10 western blots)

Cell Signaling TECHNOLOGY®

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rev. 01/26/10

Entrez-Gene ID # 5598
Swiss-Prot Acc. # Q13164

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	H, M, R, Mk	115 kDa	Rabbit**

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. 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
Immunoprecipitation	1:25

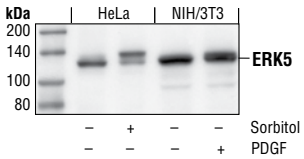
For application specific protocols please see the web page for this product at www.cellsignal.com.

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

Background: Erk5, also known as BMK1 (big mitogen-activated kinase 1), contains a TEY motif in the activation loop similar to Erk1/2, and shares high homology in the amino-terminal kinase domain with Erk1/2. However, its long carboxy-terminal domain makes Erk5 a unique MAP kinase. Erk5 is activated by a wide variety of extracellular signals, including receptor tyrosine kinases and G-protein-coupled receptors as well as osmotic and oxidative stress (1,2). The kinase directly upstream of Erk5 has been identified as MEK5 (1). MEKK2, MEKK3 and Tpl-2 are all able to activate MEK5, depending on stimulus or cell background (3-5). Growing evidence indicates that the Erk5 pathway is involved in proliferation, differentiation, oncogenesis and neuronal development (1,6-8).

Specificity/Sensitivity: Erk5 Antibody detects endogenous levels of total Erk5 protein. This antibody does not cross-react with Erk1 or Erk2.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to human Erk5. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from HeLa cells, untreated or sorbitol-treated and NIH/3T3 cells, untreated or PDGF-treated, using Erk5 Antibody.

Background References:

(1) Kato, Y. et al. (1997) *EMBO J.* 16, 7054–7066.

(2) Fukuhara, S. et al. (2000) *J. Biol. Chem.* 275, 21730–21736.

(3) Chao, T. et al. (1999) *J. Biol. Chem.* 274, 36035–36038.

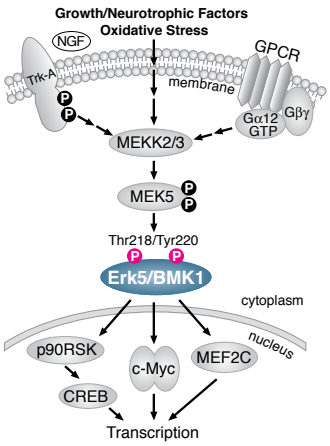
(4) Sun, W. et al. (2001) *J. Biol. Chem.* 276, 5093–5100.

(5) Chiariello, M. et al. (2000) *Mol. Cell. Biol.* 20, 1747–1758.

(6) Dinev, D. et al. (2001) *EMBO Rep.* 2, 829–834.

(7) Esparis-Ogando, A. et al. (2002) *Mol. Cell. Biol.* 22, 270–285.

(8) Watson, F.L. et al. (2001) *Nat. Neurosci.* 4, 981–988.



IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 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.