

#9128 Store at -20C

## Phospho-MEK1 (Ser298) Antibody



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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M R Mk	Endogenous	45	Rabbit	#Q02750	5604

<b>Product Usage Information</b>	<b>Application</b> Western Blotting	<b>Dilution</b> 1:1000
<b>Storage</b>	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.	
<b>Specificity / Sensitivity</b>	Phospho-MEK1 (Ser298) Antibody detects endogenous levels of MEK1 phosphorylated at serine 298. This antibody does not cross-react with phosphorylated MEK2.	
<b>Species predicted to react based on 100% sequence homology:</b>	Dog	
<b>Source / Purification</b>	Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser298 of human MEK1. Antibodies are purified by protein A and peptide affinity chromatography.	
<b>Background</b>	<p>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.</p> <p>MEK1 is phosphorylated at Ser298 by PAK1, which facilitates signal transduction from Raf to MEK1 and Erk2 (5-7). MEK1 is also phosphorylated by cdk5 at Thr286 in mitotic cells, causing negative feedback of the p44/42 MAP kinase pathway (8).</p>	
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Crews, C.M. et al. (1992) <i>Science</i> 258, 478-480.</li> <li>2. Alessi, D.R. et al. (1994) <i>EMBO J.</i> 13, 1610-19.</li> <li>3. Rosen, L.B. et al. (1994) <i>Neuron</i> 12, 1207-21.</li> <li>4. Cowley, S. et al. (1994) <i>Cell</i> 77, 841-52.</li> <li>5. Xu, B. et al. (1999) <i>J. Biol. Chem.</i> 274, 34029-34035.</li> <li>6. Coles, L.C. and Shaw, P.E. (2002) <i>Oncogene</i> 21, 2236-2244.</li> <li>7. Eblen, S. T. et al. (2002) <i>Mol. Cell. Biol.</i> 22, 6023-6033.</li> <li>8. Sharma, P. et al. (2002) <i>J. Biol. Chem.</i> 277, 528-534.</li> </ol>	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
<b>Applications Key</b>	<b>WB:</b> Western Blotting
<b>Cross-Reactivity Key</b>	<b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected

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