#9595 Store at -20°C

Phospho-MSK1 (Thr581) Antibody

Cell Signaling TECHNOLOGY®

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

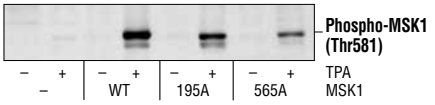
Entrez-Gene ID #9252
Swiss-Prot Acc. #O75582

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP, IHC-P Endogenous	H, M	90 kDa	Rabbit**

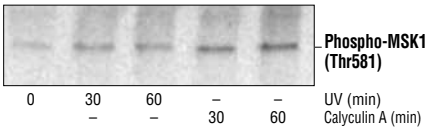
Background: MSK1, a mitogen and stress activated protein kinase, is activated by Erk as well as p38 MAPK in response to growth factors and cellular stress (1). MSK1 resembles RSK by having two kinase domains connected by a regulatory linker region (2). Phosphorylation of RSK1 at Ser364 and Ser381 is critical for RSK1 activity (3). These sites are analogous to Ser360 and Ser376 of MSK1, which may be important for MSK1 activity as well.

Specificity/Sensitivity: Phospho-MSK1 (Thr581) Antibody detects endogenous levels of MSK1 only when phosphorylated at Thr581. This antibody does not cross-react with MSK1 phosphorylated at other sites, nor does it detect phosphorylated RSK1, RSK2 or RSK3.

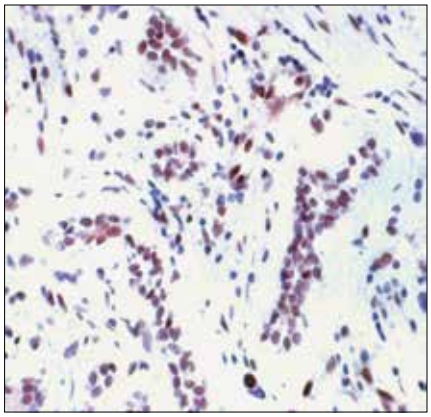
Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phospho-peptide (KLH-coupled) corresponding to residues surrounding Thr581 of human MSK1. Antibodies are purified by protein A and peptide affinity chromatography.



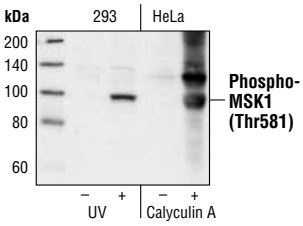
Western blot analysis of extracts from 293 cells, transfected with wt MSK1 or mutant MSK1, untreated or TPA-treated (200 nM), using Phospho-MSK1 (Thr581) Antibody.



Western blot analysis of extracts from 293 cells, untreated, UV-treated or calyculin A-treated, using Phospho-MSK1 (Thr581) Antibody.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma, showing nuclear localization, using Phospho-MSK1 (Thr581) Antibody.



Western blot analysis of extracts from 293 cells untreated or treated with UV and HeLa cells untreated or treated with calyculin A, using Phospho-MSK1 (Thr581) Antibody.

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	1:200
Immunohistochemistry (Paraffin)	1:100†
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 and a complete listing of recommended companion products please see the product web page at www.cellsignal.com

Background References:

(1) Deak, M. et al. (1998) *EMBO J.* 17, 4426–4441.

(2) Pierrat, B. et al. (1998) *J. Biol. Chem.* 273, 29661–29671.

(3) Dalby, K. et al. (1998) *J. Biol. Chem.* 273, 1496–1505.

(4) Markou, T. and Lazou, A. (2002) *Biochem J* 365, 757–63.

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 **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.