#3691 Store at -20°C

Phospho-eEF2k (Ser366) Antibody

Cell Signaling TECHNOLOGY®

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

Entrez-Gene ID #29904
Swiss-Prot Acc. #O00418

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	H, R, Mk	105 kDa	Rabbit**

Background: Eukaryotic elongation factor 2 kinase (eEF2k) phosphorylates and inactivates eEF2, resulting in the inhibition of peptide-chain elongation (1). eEF2k is normally dependent on Ca^{2+} ions and calmodulin (2,3). It can be activated by PKA in response to elevated cAMP levels (4-6), which are generally increased in stress- or starvation-related conditions. eEF2k can also be regulated in response to a wide range of stimuli that promote cell growth and protein synthesis. This involves the phosphorylation of eEF2k by p90RSK and p70 S6 kinase at Ser366 or by SAPK4/p38δ at Ser359, leading to the inactivation of eEF2k (7,8), which facilitates the dephosphorylation of eEF2, and thus promotes translation.

Specificity/Sensitivity: Phospho-eEF2k (Ser366) Antibody detects endogenous levels of eEF2k only when phosphorylated at Ser366.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser366 of human eEF2k. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

(1) Ryazanov, A.G. et al. (1997) *Proc. Natl. Acad. Sci. USA* 94, 4884–4889.

(2) Nairn, A.C. et al. (1985) *Proc. Natl. Acad. Sci. USA* 82, 7839–7943.

(3) Palfrey, H.C. et al. (1987) *J. Biol. Chem.* 262, 9785–9792.

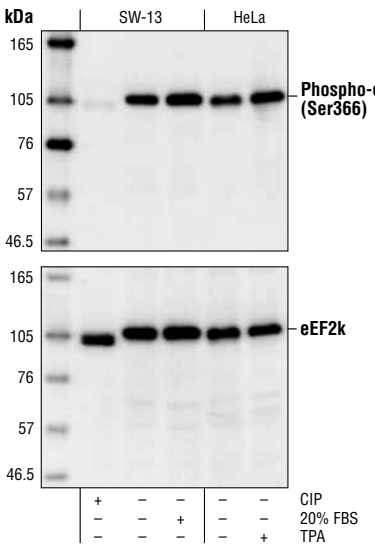
(4) Redpath, N.T. et al. (1993) *Biochem. J.* 293, 31–34.

(5) Diggle, T.A. et al. (1998) *Biochem. J.* 336, 525–529.

(6) Hovland, R. et al. (1999) *FEBS Lett.* 444, 97–101.

(7) Wang, X. et al. (2001) *EMBO J.* 20, 4370–4379.

(8) Knebel, A. et al. (2001) *EMBO J.* 20, 4360–4369.



Western blot analysis of extracts from SW-13 cells (starved for 18 hours) treated with calf intestinal alkaline phosphatase (CIP) or 20% fetal bovine serum for 30 minutes, and extracts from HeLa cells (starved for 18 hours) treated with 200 nM TPA for 30 minutes, using Phospho-eEF2k (Ser366) Antibody (upper) or eEF2k Antibody #3692 (lower).

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	1:100

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.

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.