Revision 1

Store at -20C

#3692

eEF2k Antibody

Cell Signaling TECHNOLOGY®

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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, IP, IF-IC	H R Mk	Endogenous	105	Rabbit	#O00418	29904

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:200
Immunofluorescence (Immunocytochemistry)	1:100

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.

Specificity / Sensitivity

eEF2k Antibody detects endogenous levels of total eEF2k independent of phosphorylation.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding the N-terminus of human eEF2k. Antibodies are purified by protein A and peptide affinity chromatography.

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 Ca2+ 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/p38delta at Ser359, leading to the inactivation of eEF2k (7,8), which facilitates the dephosphorylation of eEF2, and thus promotes translation.

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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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 **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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Limited Uses

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