Revision 1

Store at -20C

#2332

eEF2 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, IF-IC	H M R Mk Dm	Endogenous	95	Rabbit	#P13639	1938

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunofluorescence (Immunocytochemistry)	1:50

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

eEF2 Antibody detects endogenous levels of total eEF2 independent of phosphorylation.

Species predicted to react based on 100% sequence homology:

Hamster, Chicken

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues at the amino-terminus of human eEF2. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Eukaryotic elongation factor 2 (eEF2) catalyzes the translocation of peptidyl-tRNA from the A site to the P site on the ribosome. It has been shown that phosphorylation of eEF2 at threonine 56 by eEF2 kinase inhibits its activity (1-4). eEF2 kinase is normally dependent on Ca2+ ions and calmodulin (5,6). eEF2 kinase can also be activated by PKA in response to elevated cAMP levels (7-9), which are generally increased in stress- or starvation-related conditions. A variety of treatments known to raise intracellular Ca2+ or cAMP levels have been shown to result in increased phosphorylation of eEF2, and thus to inhibit peptide-chain elongation. The inactive phosphorylated eEF2 can be converted to its active nonphosphorylated form by a protein phosphatase, most likely a form of protein phosphatase-2A (PP-2A). Insulin, which activates protein synthesis in a wide range of cell types, induces rapid dephosphorylation of eEF2 through mTOR signaling and may involve modulation of the activity of the PP-2A or the eEF2 kinase or both (10).

Background References

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6. Palfrey, H.C. et al. (1987) *J. Biol. Chem.* 262, 9785-9792.
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8. Diggle, T. et al. (1998) *Biochem. J.* 336, 525-529.
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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 **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