

### Anti-eEF2K (Ser-359), Phosphospecific Antibody

Catalog # AN1764

### **Specification**

### Anti-eEF2K (Ser-359), Phosphospecific Antibody - Product Information

Primary Accession
Reactivity
Bovine
Host
Rabbit

Clonality Rabbit Polyclonal

Isotype IgG
Calculated MW 82144

#### Anti-eEF2K (Ser-359), Phosphospecific Antibody - Additional Information

Gene ID 29904

**Other Names** 

eEF-2, eEF-2K, CaMK-III, eukaryotic elongation factor

#### **Target/Specificity**

Eukaryotic elongation factor 2 (eEF2) catalyzes the translocation of peptidyl-tRNA from the A site to the P site on the ribosome. eEF2 kinase (eEF2K) phosphorylates and inactivates eEF2, resulting in the inhibition of peptide-chain elongation. eEF2K is normally dependent on Ca2+ ions and calmodulin, and can be activated by PKA in response to elevated cAMP levels during cell stress- or starvation-related conditions. Regulation of eEF2K occurs through phosphorylation at multiple sites. Ser-78 phosphorylation is required for calmodulin binding and eEF2K activity, while phosphorylation of Ser-500 is required for Ca2+/calmodulin-independent kinase activity. Thr-348 is an autophosphorylation site that is required for kinase activity. Inhibitory phosphorylation may also regulate eEF2K, since phosphorylation at Ser-359 by SAPK4/p38δ causes inactivation of eEF2K. Thus, multisite phospho-regulation of eEF2K may be important for proper control of eEF2K activity and protein translation.

#### Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

#### **Precautions**

Anti-eEF2K (Ser-359), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### Shipping

Blue Ice

# Anti-eEF2K (Ser-359), Phosphospecific Antibody - Protocols

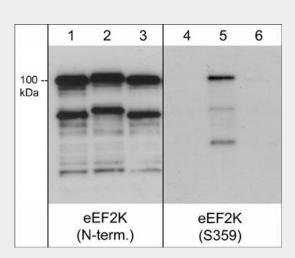
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides



- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

# Anti-eEF2K (Ser-359), Phosphospecific Antibody - Images



Recombinant human eEF2K untreated (lanes 1 and 4) and phosphorylated with p38 kinase in vitro (lanes 2 & 5). After in vitro reaction, the eEF2K was dephosphorylated with lambda phosphatase (lanes 3 & 6). The blots were probed with rabbit polyclonal anti-eEF2K (N-terminus) (lanes 1-3) or anti-eEF2K (Ser-359) (lanes 4-6). (Images provided by the laboratory of Dr. Kevin Dalby in the Dept. of Pharmacy at the University of Texas at Austin.)

## Anti-eEF2K (Ser-359), Phosphospecific Antibody - Background

Eukaryotic elongation factor 2 (eEF2) catalyzes the translocation of peptidyl-tRNA from the A site to the P site on the ribosome. eEF2 kinase (eEF2K) phosphorylates and inactivates eEF2, resulting in the inhibition of peptide-chain elongation. eEF2K is normally dependent on Ca2+ ions and calmodulin, and can be activated by PKA in response to elevated cAMP levels during cell stress- or starvation-related conditions. Regulation of eEF2K occurs through phosphorylation at multiple sites. Ser-78 phosphorylation is required for calmodulin binding and eEF2K activity, while phosphorylation of Ser-500 is required for Ca2+/calmodulin-independent kinase activity. Thr-348 is an autophosphorylation site that is required for kinase activity. Inhibitory phosphorylation may also regulate eEF2K, since phosphorylation at Ser-359 by SAPK4/p386 causes inactivation of eEF2K. Thus, multisite phospho-regulation of eEF2K may be important for proper control of eEF2K activity and protein translation.