Product Name: HRI Rabbit Polyclonal Antibody
Catalog #: APRab12205

Summary

Production Name	HRI Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	WB,ELISA
Reactivity	Human,Mouse,Monkey

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	EIF2AK1
Alternative Names	EIF2AK1; HRI; KIAA1369; Eukaryotic translation initiation factor 2-alpha kinase 1; Heme-controlled repressor; HCR; Heme-regulated eukaryotic initiation factor eIF-2-alpha kinase; Heme-regulated inhibitor; Hemin-sensitive initiation factor 2
Gene ID	27102.0
SwissProt ID	Q9BQI3.The antiserum was produced against synthesized peptide derived from human EIF2AK1. AA range:571-620

Application

Dilution Ratio	WB 1:500-2000; ELISA 2000-20000
Molecular Weight	71kD

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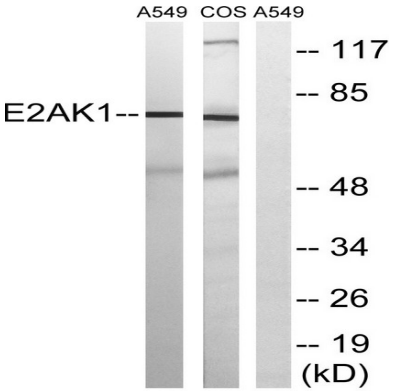
Background

The protein encoded by this gene acts at the level of translation initiation to downregulate protein synthesis in response to stress. The encoded protein is a kinase that can be inactivated by hemin. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Aug 2008],catalytic activity:ATP + a protein = ADP + a phosphoprotein.,enzyme regulation:Hemin inactivates EIF2AK1 by promoting the formation of a disulfide-linked homodimer. Binding of nitric oxide (NO) to the heme iron in the N-terminal heme-binding domain activates the kinase activity, while binding of carbon monoxide (CO) suppresses kinase activity.,function:Mediates down-regulation of protein synthesis in response to various stress conditions by the phosphorylation of EIF2S1 at 'Ser-48' and 'Ser-51'. Protein synthesis is inhibited at the level of initiation.,miscellaneous:Can bind 2 molecules of heme per polypeptide chain.,PTM:Activated by autophosphorylation; phosphorylated predominantly on serine and threonine residues, but also on tyrosine residues.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. GCN2 subfamily.,similarity:Contains 1 protein kinase domain.,similarity:Contains 2 HRM (heme regulatory motif) repeats.,subunit:Synthesized in an inactive form that binds to the N-terminal domain of CDC37. Has to be associated with a multiprotein complex containing Hsp90, CDC37 and PPP5C for maturation and activation by autophosphorylation. The phosphatase PPP5C modulates this activation. Homodimer; non-covalently bound in the absence of hemin. Converted to an inactive disulfide linked homodimer in the presence of hemin.,tissue specificity:Detected in heart, brain, placenta, lung, liver, skeletal muscle, pancreas, kidney, spleen, muscle and stomach.,

Research Area

Image Data



Western blot analysis of lysates from A549 and COS7 cells, using EIF2AK1 Antibody. The lane on the right is blocked with the synthesized peptide.

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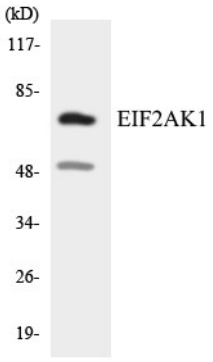
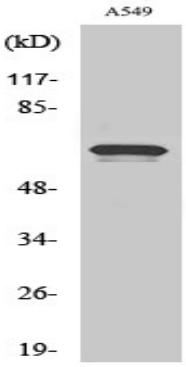


Western blot analysis of the lysates from COLO205 cells using EIF2AK1 antibody.



Western Blot analysis of various cells using HRI Polyclonal Antibody

Note

For research use only.