

Datasheet for ABIN6243641
anti-EIF2AK2 antibody (AA 1-250)



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2 Images

Overview

Quantity:	400 µL
Target:	EIF2AK2
Binding Specificity:	AA 1-250
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This EIF2AK2 antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF)

Product Details

Immunogen:	This EIF2AK2 antibody is generated from mice immunized with a recombinant protein.
Clone:	1441CT628-33-40
Isotype:	IgG1 kappa
Purification:	This antibody is purified through a protein G column, followed by dialysis against PBS.

Target Details

Target:	EIF2AK2
Alternative Name:	EIF2AK2 (EIF2AK2 Products)
Background:	IFN-induced dsRNA-dependent serine/threonine-protein kinase which plays a key role in the innate immune response to viral infection and is also involved in the regulation of signal

Target Details

transduction, apoptosis, cell proliferation and differentiation. Exerts its antiviral activity on a wide range of DNA and RNA viruses including hepatitis C virus (HCV), hepatitis B virus (HBV), measles virus (MV) and herpes simplex virus 1 (HHV-1). Inhibits viral replication via phosphorylation of the alpha subunit of eukaryotic initiation factor 2 (EIF2S1), this phosphorylation impairs the recycling of EIF2S1 between successive rounds of initiation leading to inhibition of translation which eventually results in shutdown of cellular and viral protein synthesis. Also phosphorylates other substrates including p53/TP53, PPP2R5A, DHX9, ILF3, IRS1 and the HHV-1 viral protein US11. In addition to serine/threonine-protein kinase activity, also has tyrosine-protein kinase activity and phosphorylates CDK1 at 'Tyr-4' upon DNA damage, facilitating its ubiquitination and proteosomal degradation. Either as an adapter protein and/or via its kinase activity, can regulate various signaling pathways (p38 MAP kinase, NF-kappa-B and insulin signaling pathways) and transcription factors (JUN, STAT1, STAT3, IRF1, ATF3) involved in the expression of genes encoding proinflammatory cytokines and IFNs. Activates the NF-kappa-B pathway via interaction with IKBKB and TRAF family of proteins and activates the p38 MAP kinase pathway via interaction with MAP2K6. Can act as both a positive and negative regulator of the insulin signaling pathway (ISP). Negatively regulates ISP by inducing the inhibitory phosphorylation of insulin receptor substrate 1 (IRS1) at 'Ser- 312' and positively regulates ISP via phosphorylation of PPP2R5A which activates FOXO1, which in turn up-regulates the expression of insulin receptor substrate 2 (IRS2). Can regulate NLRP3 inflammasome assembly and the activation of NLRP3, NLRP1, AIM2 and NLRC4 inflammasomes. Can trigger apoptosis via FADD-mediated activation of CASP8. Plays a role in the regulation of the cytoskeleton by binding to gelsolin (GSN), sequestering the protein in an inactive conformation away from actin.

Molecular Weight: 62094

UniProt: [P19525](#)

Pathways: [DNA Damage Repair](#), [ER-Nucleus Signaling](#), [Hepatitis C](#)

Application Details

Application Notes: IF: 1:25. WB: 1:1000-1:2000

Restrictions: For Research Use only

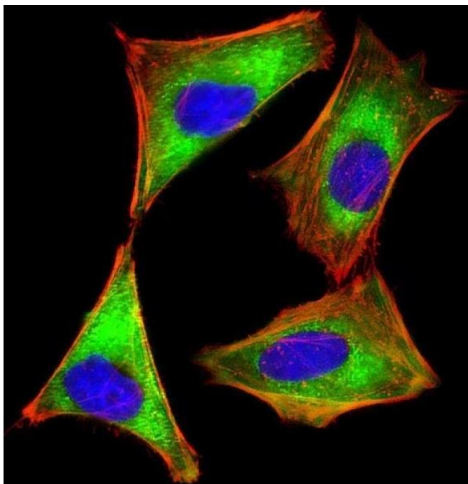
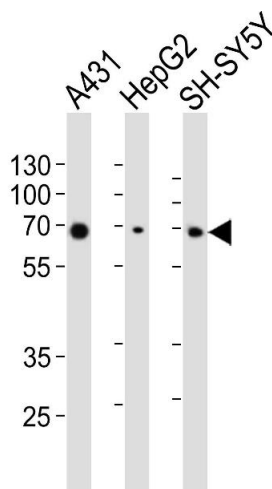
Handling

Format: Liquid

Handling

Buffer:	Purified monoclonal antibody supplied in PBS with 0.09 % (W/V) sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Expiry Date:	6 months

Images



Western Blotting

Image 1. Western blot analysis of lysates from A431, HepG2, SH-SY5Y cell line (from left to right), using EIF2AK2 Antibody (ABIN6243641 and ABIN6577090). (ABIN6243641 and ABIN6577090) was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L(HRP) at 1:3000 dilution was used as the secondary antibody. Lysates at 20 µg per lane.

Immunofluorescence

Image 2. Immunofluorescent analysis of 4 % paraformaldehyde-fixed, 0.1 % Triton X-100 permeabilized HeLa (human cervical epithelial adenocarcinoma cell line) cells labeling EIF2AK2 with (ABIN6243641 and ABIN6577090) at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-mouse IgG (NA166821) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm staining on HeLa cell line. Cytoplasmic actin is detected with Dylight® 554 Phalloidin (PD18466410) at 1/100 dilution (red).The nuclear counterstain is DAPI (blue).