

EIF2AK3 Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8570b

Specification

EIF2AK3 Antibody - Product Information

Application	WB,E
Primary Accession	O9NZJ5
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	monoclonal
Isotype	IgG1
Calculated MW	125216

EIF2AK3 Antibody - Additional Information

Gene ID 9451

Other Names

Eukaryotic translation initiation factor 2-alpha kinase 3, 2.7.11.1, PRKR-like endoplasmic reticulum kinase, Pancreatic eIF2-alpha kinase, HsPEK, EIF2AK3, PEK, PERK

Target/Specificity

This EIF2AK3 antibody is generated from a mouse immunized with a recombinant protein conjugated synthetic peptide between 530-850 amino acids from human EIF2AK3.

Dilution

WB~~1:250-1:1000

Format

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

Storage

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

Precautions

EIF2AK3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

EIF2AK3 Antibody - Protein Information

Name EIF2AK3

Synonyms PEK, PERK

Function Metabolic-stress sensing protein kinase that phosphorylates the alpha subunit of eukaryotic translation initiation factor 2 (EIF2S1/eIF-2-alpha) in response to various stress

conditions. Key activator of the integrated stress response (ISR) required for adaptation to various stress, such as unfolded protein response (UPR) and low amino acid availability (By similarity). EIF2S1/eIF-2-alpha phosphorylation in response to stress converts EIF2S1/eIF-2-alpha in a global protein synthesis inhibitor, leading to a global attenuation of cap-dependent translation, while concomitantly initiating the preferential translation of ISR-specific mRNAs, such as the transcriptional activators ATF4 and QRICH1, and hence allowing ATF4- and QRICH1-mediated reprogramming (PubMed:[33384352](#)). Serves as a critical effector of unfolded protein response (UPR)-induced G1 growth arrest due to the loss of cyclin-D1 (CCND1). Involved in control of mitochondrial morphology and function (By similarity).

Cellular Location

Endoplasmic reticulum membrane; Single-pass type I membrane protein

Tissue Location

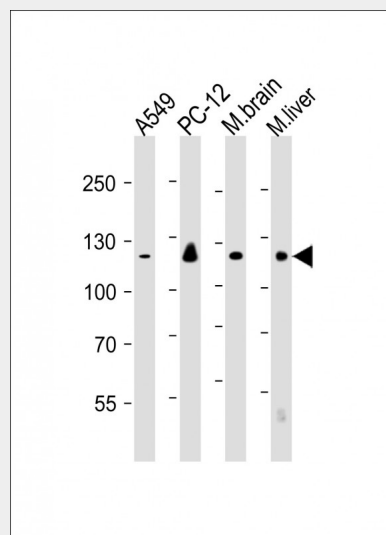
Ubiquitous. A high level expression is seen in secretory tissues

EIF2AK3 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 Cytometry](#)
- [Cell Culture](#)

EIF2AK3 Antibody - Images



All lanes : Anti-EIF2AK3 Antibody at 1:250-1:1000 dilution Lane 1: A549 whole cell lysate Lane 2: PC-12 whole cell lysate Lane 3: mouse brain lysate Lane 4: mouse liver lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 125 kDa Blocking/Dilution buffer: 5% NFD/MTBST.

EIF2AK3 Antibody - Background

Phosphorylates the alpha subunit of eukaryotic translation-initiation factor 2 (EIF2), leading to its inactivation and thus to a rapid reduction of translational initiation and repression of global protein synthesis. Serves as a critical effector of unfolded protein response (UPR)-induced G1 growth arrest due to the loss of cyclin-D1 (CCND1). Involved in control of mitochondrial morphology and function (By similarity).

EIF2AK3 Antibody - References

Shi Y.,et al.J. Biol. Chem. 274:5723-5730(1999).
Sood R.,et al.Biochem. J. 346:281-293(2000).
Delepine M.,et al.Nat. Genet. 25:406-409(2000).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Hillier L.W.,et al.Nature 434:724-731(2005).