

Rabbit EIF2AK4 Polyclonal Antibody | anti-EIF2AK4 antibody

Anti-EIF2AK4 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA125593	Rabbit	Human, Mouse, Monkey	ELISA, Flow Cytometry, Functional Assay, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

EIF2AK4; Polyclonal Antibody; Anti-EIF2AK4 Antibody; GCN2; KIAA1338; eIF-2-alpha kinase GCN2; EC 2. 7. 11. 1; Eukaryotic translation initiation factor 2-alpha kinase 4; GCN2-like protein; eukaryotic translation initiation factor 2 alpha kinase 4; anti-EIF2AK4 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Monkey
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Rabbit IgG polyclonal antibody for EIF2AK4 detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg NaN3.
Applicable Applications for anti-EIF2AK4 antibody	ELISA (Direct ELISA), FCM/FACS (Flow Cytometry), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	E Coli-derived human EIF2AK4 recombinant protein (Position: Q23-K440).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.

IMAGES



FCM/FACS (Flow Cytometry)

Figure 3. Flow Cytometry analysis of THP-1 cells using anti-EIF2AK4 antibody (AAA125593). Overlay histogram showing THP-1 cells stained with AAA125593 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-EIF2AK4 Antibody (AAA125593, 1µg/1x10⁶ cells) for 30 min at 20 degree C. DyLight[®]488 conjugated goat anti-rabbit IgG (5-10µg/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1µg/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



IHC (Immunohistochemistry)

Figure 2. IHC analysis of EIF2AK4 using anti-EIF2AK4 antibody (AAA125593). EIF2AK4 was detected in paraffin-embedded section of human mammary cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2µg/ml rabbit anti-EIF2AK4 Antibody (AAA125593) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



WB (Western Blot)

Figure 1. Western blot analysis of EIF2AK4 using anti-EIF2AK4 antibody (AAA125593). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: human U87 whole cell lysates Lane 2: human HepG2 whole cell lysates Lane 3: monkey COS-7 whole cell lysates Lane 4: mouse brain tissue lysates Lane 5: mouse lung tissue lysates Lane 6: mouse ANA-1 whole cell lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1. 5 hour at RT. The membrane was incubated with rabbit anti-EIF2AK4 antigen affinity purified polyclonal antibody (Catalog # AAA125593) at 0. 25 μg/mL overnight at 4 degree C, then washed with TBS-0. 1% Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1. 5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for EIF2AK4 at approximately 180-200KD. The expected band size for EIF2AK4 is at 187KD.

ADDITIONAL INFORMATION

Related Product Information for anti-EIF2AK4 antibody	EIF2AK4(Eukaryotic Translation Initiation Factor 2-Alpha Kinase 4), also called GCN2, is an enzyme that in humans is encoded by the EIF2AK4 gene. EIF2AK4 belongs to a family of kinases that phosphorylate the alpha subunit of eukaryotic translation initiation factor-2 to downregulate protein synthesis in response to varied cellular stresses. Hartz(2005) mapped the EIF2AK4 gene to chromosome 15q15. 1 based on an alignment of the EIF2AK4 sequence with the genomic sequence. Berlanga et al. (1999) demonstrated that Gcn2 immunopurified from mouse liver extracts could phosphorylate rabbit Eif2 in vitro. Serum starvation increased the level of phosphorylated EIF2-alpha more than 2-fold in human embryonic kidney cells transfected with mouse Eif2ak4. Costa-Mattioli et al. (2005) reported a unique feature of hippocampal slices from Gcn2-null mice: in CA1, a single 100-Hz train induced a strong and sustained long-term potentiation(late LTP or L-LTP), which was dependent on transcription and translation.
References	1. Berlanga, J. J., Santoyo, J., de Haro, C. Characterization of a mammalian homolog of the GCN2 eukaryotic initiation factor 2-alpha kinase. Europ. J. Biochem. 265: 754-762, 1999. 2. Costa-Mattioli, M., Gobert, D., Harding, H., Herdy, B., Azzi, M., Bruno, M., Bidinosti, M., Ben Mamou, C., Marcinkiewicz, E., Yoshida, M., Imataka, H., Cuello, A. C., Seidah, N., Sossin, W., Lacaille, J. -C., Ron, D., Nader, K., Sonenberg, N. Translational control of hippocampal synaptic plasticity and memory by the eIF2-alpha kinase GCN2. Nature 436: 1166-1170, 2005. 3. Hartz, P. A. Personal Communication. Baltimore, Md. 3/28/2005.

NCBI AND UNIPROT INFORMATION

NCBI GI #	296439368
NCBI GeneID	440275
UniProt Accession #	Q9P2K8; Q69YL7; Q6DC97; Q96GN6; Q9H5K1; Q9NSQ3; Q9NSZ5; Q9UJ56; C9JEC4
NCBI Official Full Name	Eukaryotic translation initiation factor 2-alpha kinase 4
NCBI Official Synonym Full Names	eukaryotic translation initiation factor 2 alpha kinase 4
NCBI Official Symbol	EIF2AK4
NCBI Official Synonym Symbols	GCN2; PVOD2
NCBI Protein Information	eukaryotic translation initiation factor 2-alpha kinase 4; GCN2-like protein; GCN2 eIF2alpha kinase; general control nonderepressible 2
UniProt Protein Name	Eukaryotic translation initiation factor 2-alpha kinase 4
UniProt Gene Name	EIF2AK4
UniProt Synonym Gene Names	GCN2; KIAA1338

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/eif2ak4-antibody-direct-elisa-flow-cytometry-immunohistochemistry-western-blot-elisa/125593>