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Anti-PERK/EIF2AK3 Antibody Picoband™

Catalog Number: A01992-2

About EIF2AK3

Eukaryotic translation initiation factor 2-alpha kinase 3, also known as protein kinase R (PKR)-like endoplasmic reticulum kinase (PERK), is an enzyme that in humans is encoded by the EIF2AK3 gene. The protein encoded by this gene phosphorylates the alpha subunit of eukaryotic translation-initiation factor 2, leading to its inactivation, and thus to a rapid reduction of translational initiation and repression of global protein synthesis. This protein is thought to modulate mitochondrial function. It is a type I membrane protein located in the endoplasmic reticulum (ER), where it is induced by ER stress caused by malfolded proteins. Mutations in this gene are associated with Wolcott-Rallison syndrome.

Overview

Product Name	Anti-PERK/EIF2AK3 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-PERK/EIF2AK3 Antibody Picoband™ catalog # A01992-2. Tested in ELISA, Flow Cytometry, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	ELISA, Flow Cytometry, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg NaN_3.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q9NZJ5

Technical Details

Immunogen	E. coli-derived human PERK recombinant protein (Position: R222-Q334).
Predicted Reactive Species	Human
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.

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Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml Flow Cytometry, 1-3ug/1x10^6 cells Direct ELISA, 0.1-0.5ug/ml

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Anti-PERK/EIF2AK3 Antibody Picoband™ (A01992-2) Images

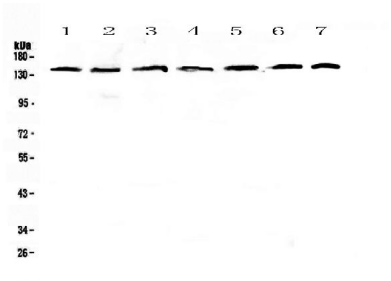

Figure 1. Western blot analysis of PERK using anti-PERK antibody (A01992-2).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,
Lane 2: human COLO-320 whole cell lysates,
Lane 3: human A549 whole cell lysates,
Lane 4: human SK-OV-3 whole cell lysates,
Lane 5: Human A431 whole cell lysates,
Lane 6: rat brain tissue lysates,
Lane 7: mouse brain tissue 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-PERK antigen affinity purified polyclonal antibody (Catalog # A01992-2) at 0.5 ug/mL overnight at 4°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 (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for PERK at approximately 140KD. The expected band size for PERK is at 125KD.

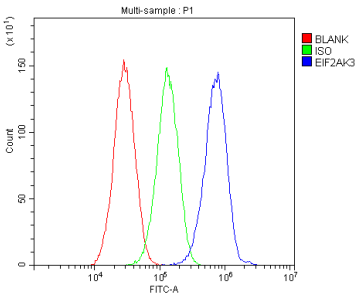

Figure 2. Flow Cytometry analysis of HepG2 cells using anti-PERK antibody (A01992-2).
Overlay histogram showing HepG2 cells stained with A01992-2 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-PERK Antibody (A01992-2,1ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

7 Publications Citing This Product

1. PubMed ID: 10.1590/1414-431x20199085, Total Panax notoginseng saponin inhibits balloon injury-induced neointimal hyperplasia in rat carotid artery models by suppressing pERK/p38 MAPK pathways

2. PubMed ID: PMID:27293989, Recombinant Newcastle disease virus (rL-RVG) triggers autophagy and apoptosis in gastric carcinoma cells by inducing ER stress

3. PubMed ID: 10.3892/ol.2013.1651, Endoplasmic reticulum stress in diethylnitrosamine□induced rat liver cancer

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