



[Go to Product page](#)

Datasheet for ABIN5693216
anti-PERK antibody (AA 222-334)

1 Image

1 Publication

Overview

Quantity:	100 µg
Target:	PERK (EIF2AK3)
Binding Specificity:	AA 222-334
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Application:	ELISA, Western Blotting (WB)

Product Details

Brand:	Picoband™
Immunogen:	E. coli-derived human PERK recombinant protein (Position: R222-Q334).
Cross-Reactivity (Details):	No cross reactivity with other proteins.
Characteristics:	Rabbit IgG polyclonal antibody for PERK detection. Tested with WB, Direct ELISA in Human, Mouse, Rat.

Target Details

Target:	PERK (EIF2AK3)
Alternative Name:	EIF2AK3 (EIF2AK3 Products)
Background:	Synonyms: Eukaryotic translation initiation factor 2-alpha kinase 3, PRKR-like endoplasmic reticulum kinase, Pancreatic eIF2-alpha kinase, HsPEK, EIF2AK3, PEK, PERK Tissue Specificity: Ubiquitous. A high level expression is seen in secretory tissues.

Target Details

Background: 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 malformed proteins. Mutations in this gene are associated with Wolcott-Rallison syndrome.

Pathways: [Hormone Transport, ER-Nucleus Signaling, Positive Regulation of Endopeptidase Activity, Hepatitis C](#)

Application Details

Application Notes: Recommended Detection Systems: Enhanced Chemiluminescent Kit with anti-Rabbit IgG (ABIN921124) for Western blot.

Application Details: Western blot, 0.1-0.5 µg/mL

Direct ELISA, 0.1-0.5 µg/mL

Restrictions: For Research Use only

Handling

Format: Lyophilized

Reconstitution: Add 0.2 mL of distilled water will yield a concentration of 500 µg/mL.

Buffer: Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na₂HPO₄, 0.05 mg NaN₃.

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

Storage Comment: At -20°C for one year. After reconstitution, at 4°C for one month.
It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Publications

Product cited in: Wang, Sun, Shen, Wu, Liu, Yang, Ji, Ji, Li: "Octreotide Protects the Mouse Retina against

Ischemic Reperfusion Injury through Regulation of Antioxidation and Activation of NF- κ B." in:

Oxidative medicine and cellular longevity, Vol. 2015, pp. 970156, (2016) ([PubMed](#)).

Images

**Western Blotting**

Image 1. Western blot analysis of PERK using anti-PERK antibody. 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 50 μ g 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 #) at 0.5 μ g/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.