

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



[Go to Product page](#)

1 Image 1 Publication

Overview

Quantity:	100 µg
Target:	PERK (EIF2AK3)
Binding Specificity:	AA 222-334
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This PERK antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Flow Cytometry (FACS)

Product Details

Purpose:	Anti-PERK/EIF2AK3 Antibody Picoband®
Immunogen:	E. coli-derived human PERK recombinant protein (Position: R222-Q334).
Isotype:	IgG
Cross-Reactivity (Details):	No cross-reactivity with other proteins.
Characteristics:	Anti-PERK/EIF2AK3 Antibody Picoband® (ABIN5693216). Tested in ELISA, Flow Cytometry, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.

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. 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.
Molecular Weight:	140 kDa
Gene ID:	9451
Pathways:	Hormone Transport , ER-Nucleus Signaling , Positive Regulation of Endopeptidase Activity , Hepatitis C , Unfolded Protein Response

Application Details

Application Notes:	Western blot, 0.1-0.5 µg/mL Flow Cytometry (Fixed), 1-3 µg/1x10⁶ cells ELISA, 0.1-0.5 µg/mL 1. Harding, H. P., Zhang, Y., Bertolotti, A., Zeng, H., Ron, D. Perk is essential for translational regulation and cell survival during the unfolded protein response. <i>Molec. Cell</i> 5: 897-904, 2000. 2. Hayes, S. E., Conner, L. J., Stramm, L. E., Shi, Y. Assignment of pancreatic eIF-2α kinase (EIF2AK3) to human chromosome band 2p12 by radiation hybrid mapping and in situ hybridization. <i>Cytogenet. Cell Genet.</i> 86: 327-328, 1999. 3. Kittler, R., Putz, G., Pelletier, L., Poser, I., Heninger, A.-K., Drechsel, D., Fischer, S., Konstantinova, I., Habermann, B., Grabner, H., Yaspo, M.-L., Himmelbauer, H., Korn, B., Neugebauer, K., Pisabarro, M. T., Buchholz, F. An endoribonuclease-prepared siRNA screen in human cells identifies genes essential for cell division. <i>Nature</i> 432: 1036-1040, 2004.
Restrictions:	For Research Use only

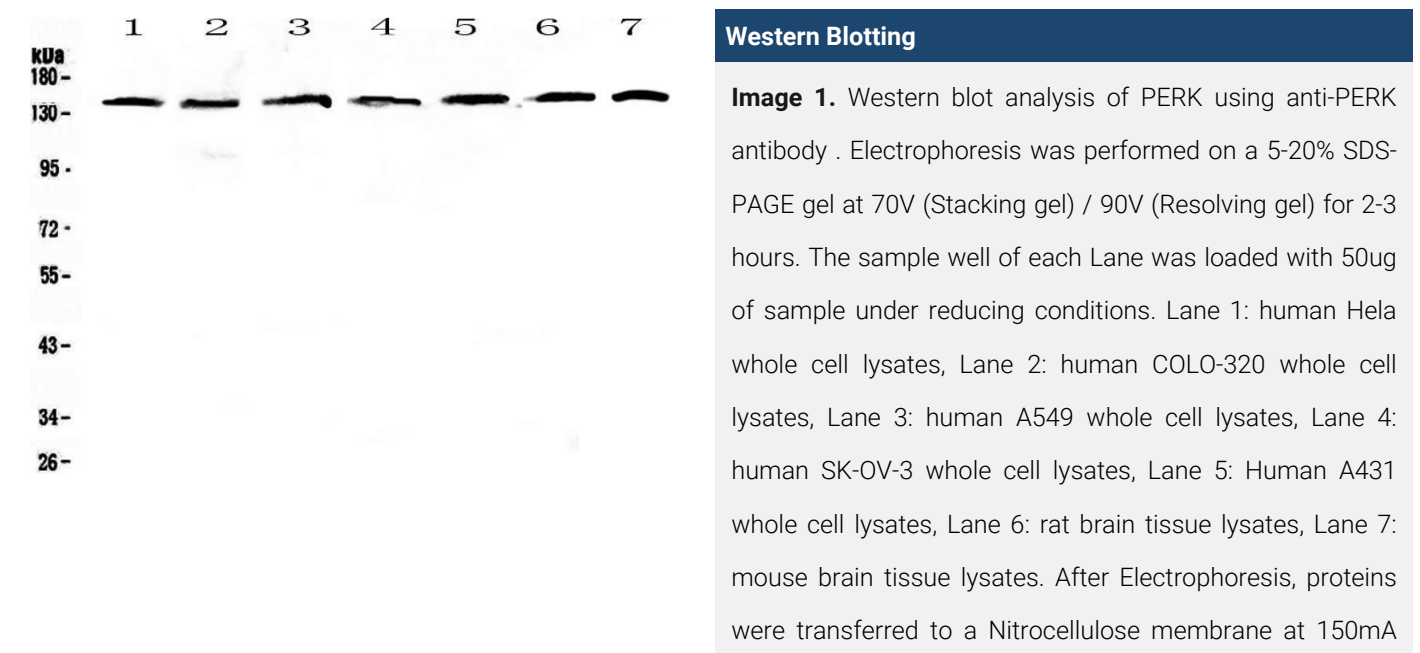
Handling

Format:	Lyophilized
Reconstitution:	Add 0.2 mL of distilled water will yield a concentration of 500 µg/mL.
Concentration:	500 µg/mL
Buffer:	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ , 0.05 mg NaN ₃ .
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:	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.

Publications

Product cited in:	Bu, Zhao, Zhang, Wang, Li, Yan: "Recombinant Newcastle disease virus (rL-RVG) triggers autophagy and apoptosis in gastric carcinoma cells by inducing ER stress." in: American journal of cancer research , Vol. 6, Issue 5, pp. 924-36, (2016) (PubMed).
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Images



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 µg/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.