

Product datasheet

Anti-PERK antibody [EPR19876-294] ab229912

KO VALIDATED Recombinant RabMAb[®]

★★★★☆ [5 Abreviews](#) [29 References](#) [3 Images](#)

Overview

Product name	Anti-PERK antibody [EPR19876-294]
Description	Rabbit monoclonal [EPR19876-294] to PERK
Host species	Rabbit
Tested applications	Suitable for: WB Unsuitable for: Flow Cyt, ICC/IF, IHC-P or IP
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Wild-type HAP1, HeLa, U-87 MG, HEK-293T, MCF7, RAW 264.7, NIH/3T3 and PC-12 whole cell lysates; Mouse brain lysate; Rat brain and liver lysates.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR19876-294

Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab229912 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (3)	1/1000. Detects a band of approximately 150 kDa (predicted molecular weight: 125 kDa).

Application notes Is unsuitable for Flow Cyt, ICC/IF, IHC-P or IP.

Target

Function 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.

Tissue specificity Ubiquitous. A high level expression is seen in secretory tissues.

Involvement in disease Defects in EIF2AK3 are the cause of Wolcott-Rallison syndrome (WRS) [MIM:226980]; also known as multiple epiphyseal dysplasia with early-onset diabetes mellitus. WRS is a rare autosomal recessive disorder, characterized by permanent neonatal or early infancy insulin-dependent diabetes and, at a later age, epiphyseal dysplasia, osteoporosis, growth retardation and other multisystem manifestations, such as hepatic and renal dysfunctions, mental retardation and cardiovascular abnormalities.

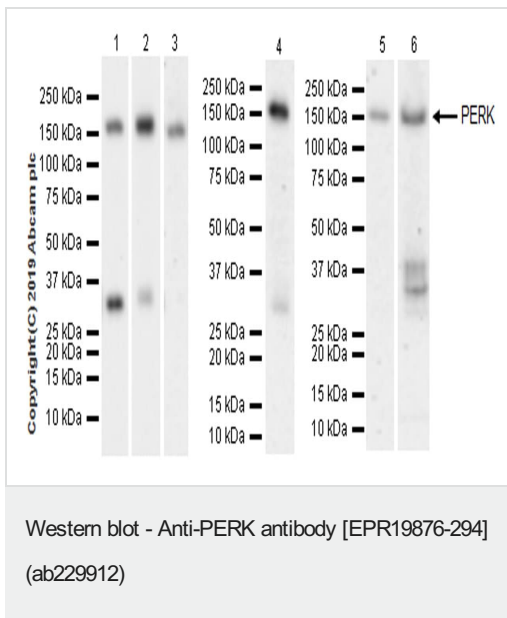
Sequence similarities Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. GCN2 subfamily. Contains 1 protein kinase domain.

Domain The luminal domain senses perturbations in protein folding in the ER, probably through reversible interaction with HSPA5/BIP.

Post-translational modifications Autophosphorylated.
N-glycosylated.

Cellular localization Endoplasmic reticulum membrane.

Images



All lanes : Anti-PERK antibody [EPR19876-294] (ab229912) at 1/1000 dilution

Lane 1 : RAW 264.7 (mouse macrophage cell line transformed with Abelson murine leukemia virus) whole cell lysate

Lane 2 : NIH/3T3 (mouse embryo fibroblast cell line) whole cell lysate

Lane 3 : PC-12 (rat adrenal gland pheochromocytoma cell line) whole cell lysate

Lane 4 : Mouse brain lysate

Lane 5 : Rat brain lysate

Lane 6 : Rat liver lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

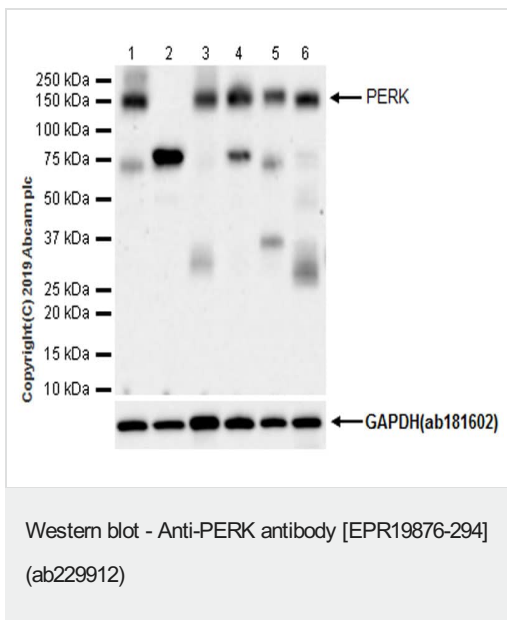
Predicted band size: 125 kDa

Observed band size: 150 kDa

Exposure time: Lanes 1-2: 37 seconds; Lanes 3-6: 3 minutes.

Blocking/Dilution buffer: 5% NFD/MTBST.

This antibody also recognizes unidentifiable proteins below 37 kDa.



All lanes : Anti-PERK antibody [EPR19876-294] (ab229912) at 1/1000 dilution

Lane 1 : Wild-type HAP1 whole cell lysate

Lane 2 : PERK knockout HAP1 whole cell lysate

Lane 3 : U-87 MG (human glioblastoma-astrocytoma epithelial cell line) whole cell lysate

Lane 4 : HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lane 5 : HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate

Lane 6 : MCF7 (human breast adenocarcinoma cell line) whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 125 kDa

Observed band size: 150 kDa

Exposure time: 125 seconds


Blocking/Dilution buffer: 5% NFDm/TBST.

ab229912 was shown to specifically react with PERK in wild-type HAP1 cells as signal was lost in PERK knockout cells. Wild-type and PERK knockout samples were subjected to SDS-PAGE. ab229912 and **ab181602** (Rabbit anti-GAPDH loading control) were incubated 1 hour at room temperature at 1/1000 dilution and 1/200,000 dilution respectively. Blots were developed with Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (**ab97051**) secondary antibody at 1/100,000 dilution for 1 hour at room

temperature before imaging. The blot was developed on a BIO-RAD® ChemiDoc™ MP instrument using the ECL technique.

This antibody also recognizes unidentifiable proteins below 75 kDa.

Why choose a recombinant antibody?



- Research with confidence**
Consistent and reproducible results
- Long-term and scalable supply**
Recombinant technology
- Success from the first experiment**
Confirmed specificity
- Ethical standards compliant**
Animal-free production

Anti-PERK antibody [EPR19876-294] (ab229912)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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