Human PERK Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF3999

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human PERK in Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human PERK Ala29-Gln230 Accession # Q9NZJ5
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

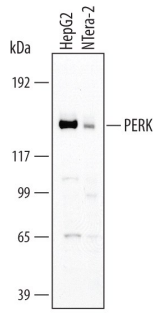
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Knockout Validated	PERK is specifically detected in HeLa human cervical epithelial carcinoma parental cell line but is not detectable in PERK knockout HeLa cell line.	

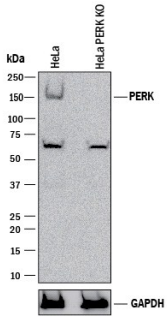
DATA

Western Blot



Detection of Human PERK by Western Blot. Western blot shows lysates of HepG2 human hepatocellular carcinoma cell line and NTera-2 human testicular embryonic carcinoma cell line. PVDF membrane was probed with 1 µg/mL of Human PERK Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3999) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for PERK at approximately 130 kDa (as indicated). This experiment was conducted using Immunoblot Buffer Group 1.

Knockout Validated



Western Blot Shows Human PERK Specificity by Using Knockout Cell Line. Western blot shows lysates of HeLa human cervical epithelial carcinoma parental cell line and PERK knockout HeLa cell line (KO). PVDF membrane was probed with 1 µg/mL of Goat Anti-Human PERK Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3999) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for PERK at approximately 150 kDa (as indicated) in the parental HeLa cell line, but is not detectable in knockout HeLa cell line. GAPDH (Catalog # AF5718) is shown as a loading control. This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

PERK, a type 1 ER membrane kinase, mediates eIF2α phosphorylation at Ser51 during the UPR (unfolded protein response). Protein synthesis is inhibited, thereby reducing the burden of protein substrate for the ER folding and degradation mechanism. Phosphorylation of eIF2α also selectively promotes the expression of UPR target genes such as Chop and BiP. PERK may also play a role in tumor cell adaptation to hypoxic stress by regulating the translation of angiogenic factors necessary for the development of functional microvessels. Mutations in PERK are responsible for the rare autosomal-recessive disorder, WRS (Wolcott-Rallison syndrome).

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