

PERK (C33E10) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, W-S	H M R Mk	Endogenous	140	Rabbit IgG	#Q9NZJ5	9451

Product Usage Information**Application**

Western Blotting
Simple Western™

Dilution

1:1000
1:10 - 1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

PERK (C33E10) Rabbit mAb detects endogenous levels of total PERK protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val248 of human PERK protein.

Background

Protein kinase-like endoplasmic reticulum kinase (PERK) is an eIF2α kinase and transmembrane protein resident in the endoplasmic reticulum (ER) membrane that couples ER stress signals to translation inhibition (1-3). ER stress increases the activity of PERK, which then phosphorylates eIF2α to promote reduced translation. Research studies have demonstrated that PERK-deficient mice have defects in pancreatic β cells several weeks after birth, suggesting a role for PERK-mediated translational control in protecting secretory cells from ER stress (4). PERK activation during ER stress correlates with autophosphorylation of its cytoplasmic kinase domain (1-3). Phosphorylation of PERK at Thr980 serves as a marker for its activation status.

Background References

1. Harding, H. et al. (1999) *Nature* 397, 271-274.
2. Shi, Y. et al. (1998) *Mol. Cell. Biol.* 18, 7499-7509.
3. Harding, H. et al. (2000) *Mol. Cell* 5, 897-904.
4. Harding, H. et al. (2001) *Mol. Cell* 7, 1153-1163.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **W-S:** Simple Western™

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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