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#3192

## PERK (C33E10) Rabbit mAb

**For Research Use Only. Not for Use in Diagnostic Procedures.**

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

- Harding, H. et al. (1999) *Nature* 397, 271-274.
- Shi, Y. et al. (1998) *Mol. Cell. Biol.* 18, 7499-7509.
- Harding, H. et al. (2000) *Mol. Cell* 5, 897-904.
- 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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