

Phospho-PERK (Thr980) (16F8) Rabbit mAb

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	M R	Endogenous	170	Rabbit IgG	#Q9Z2B5	13666

Product Usage Information	Application	Dilution
	Western Blotting	1:1000
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	Phospho-PERK (Thr980) (16F8) Rabbit mAb detects endogenous levels of PERK phosphorylated at Thr980.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr980 of mouse PERK.	
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	<ol style="list-style-type: none"> Harding, H. et al. (1999) <i>Nature</i> 397, 271-274. Shi, Y. et al. (1998) <i>Mol. Cell. Biol.</i> 18, 7499-7509. Harding, H. et al. (2000) <i>Mol. Cell</i> 5, 897-904. Harding, H. et al. (2001) <i>Mol. Cell</i> 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
Cross-Reactivity Key	M: Mouse R: Rat
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