

**#3179** Store at -20C**Phospho-PERK (Thr980) (16F8)  
Rabbit mAb****Cell Signaling**  
TECHNOLOGY®**Orders:** 877-616-CELL (2355)  
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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:
WB	M R	Endogenous	170	Rabbit IgG	#Q9Z2B5	13666

<b>Product Usage Information</b>	<b>Application</b> Western Blotting	<b>Dilution</b> 1:1000
<b>Storage</b>	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.	
<b>Specificity / Sensitivity</b>	Phospho-PERK (Thr980) (16F8) Rabbit mAb detects endogenous levels of PERK phosphorylated at Thr980.	
<b>Species predicted to react based on 100% sequence homology:</b>	Mouse	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr980 of mouse PERK.	
<b>Background</b>	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.	
<b>Background References</b>	<ol style="list-style-type: none"> <li>Harding, H. et al. (1999) <i>Nature</i> 397, 271-274.</li> <li>Shi, Y. et al. (1998) <i>Mol. Cell. Biol.</i> 18, 7499-7509.</li> <li>Harding, H. et al. (2000) <i>Mol. Cell</i> 5, 897-904.</li> <li>Harding, H. et al. (2001) <i>Mol. Cell</i> 7, 1153-1163.</li> </ol>	
<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).	
<b>Western Blot Buffer</b>	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.	
<b>Applications Key</b>	<b>WB:</b> Western Blotting	
<b>Cross-Reactivity Key</b>	<b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected	
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