


#5683 Store at -20C

## PERK (D11A8) Rabbit mAb



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| Applications:                    | Reactivity:   | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|----------------------------------|---|--------------|-----------|-----------------|-------------|-----------------|
| WB, IP, IHC-P                    | H   | Endogenous   | 140       | Rabbit IgG      | #Q9NZJ5     | 9451            |
| <hr/>                            |   |              |           |                 |             |                 |
| <b>Product Usage Information</b> | <b>Application</b>  |              |           |                 |             | <b>Dilution</b> |
|                                  | Western Blotting  |              |           |                 |             | 1:1000          |
|                                  | Immunoprecipitation   |              |           |                 |             | 1:50            |
|                                  | Immunohistochemistry (Paraffin)   |              |           |                 |             | 1:2000          |
| <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> | PERK (D11A8) Rabbit mAb recognizes endogenous levels of total PERK protein. Staining of red blood cells has been observed. The specificity of this staining is unknown.   |              |           |                 |             |                 |
| <b>Source / Purification</b>     | Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu156 of human PERK protein.  |              |           |                 |             |                 |
| <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>     | 1. Harding, H. et al. (1999) <i>Nature</i> 397, 271-274.<br>2. Shi, Y. et al. (1998) <i>Mol. Cell. Biol.</i> 18, 7499-7509.<br>3. Harding, H. et al. (2000) <i>Mol. Cell</i> 5, 897-904.<br>4. Harding, H. et al. (2001) <i>Mol. Cell</i> 7, 1153-1163.   |              |           |                 |             |                 |

|                               |   |
|-------------------------------|---|
| <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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.  |
| <b>Applications Key</b>       | <b>WB:</b> Western Blotting <b>IP:</b> Immunoprecipitation <b>IHC-P:</b> Immunohistochemistry (Paraffin)  |
| <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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