

**PhosphoPlus® PERK (Thr980) Antibody
Duet****Orders:** 877-616-CELL (2355)
orders@cellsignal.com**Support:** 877-678-TECH (8324)**Web:** info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.**UniProt ID:** #Q9Z2B5, #Q9NZJ5
Entrez-Gene Id: 13666, 9451

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Phospho-PERK (Thr980) (16F8) Rabbit mAb	3179	100 µl	170 kDa	Rabbit IgG
PERK (C33E10) Rabbit mAb	3192	100 µl	140 kDa	Rabbit IgG

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.**Description**

PhosphoPlus® Duets from Cell Signaling Technology (CST) provide a means to assess protein activation status. Each Duet contains an activation-state and total protein antibody to your target of interest. These antibodies have been selected from CST's product offering based upon superior performance in specified applications.

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.

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.

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

PhosphoPlus is a registered trademark of Cell Signaling Technology, Inc.

U.S. Patent No. 7,429,487, foreign equivalents, and child patents deriving therefrom.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise

attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.