

#2640 Store at -20°C

# Phospho-PRAS40 (Thr246) Antibody

✓ Small 100 µl (10 western blots)



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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

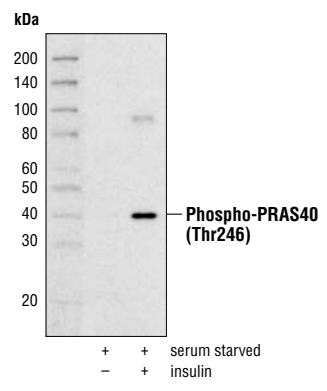
Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	M, H, R, Mk	40 kDa	Rabbit**

**Background:** Many growth factors and hormones induce the phosphoinositide 3-kinase signaling pathway, which results in the activation of downstream effector proteins such as the serine/threonine kinase Akt (1,2). One known Akt substrate is a 40 kDa, proline-rich protein (PRAS40) that binds to 14-3-3 protein (2). PRAS40 also binds mTOR to transduce Akt signals to the mTOR complex. Inhibition of mTOR signaling stimulates PRAS40 binding to mTOR, which in turn inhibits mTOR activity (3). PRAS40 interacts with Raptor in mTOR complex 1 (mTORC1) in insulin-deprived cells and inhibits the activation of the mTORC1 pathway mediated by the cell cycle protein Rheb. Phosphorylation of PRAS40 by Akt at Thr246 relieves PRAS40 inhibition of mTORC1 (4).

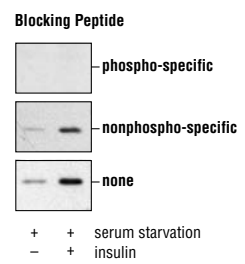
**Specificity/Sensitivity:** Phospho-PRAS40 (Thr246) Antibody detects endogenous levels of PRAS40 protein only when phosphorylated at Thr246.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to the sequence surrounding Thr246 of human PRAS40. Antibodies are purified by peptide affinity chromatography.

- Background References:**
- (1) Cantley, L.C. (2002) *Science* 296, 1655–7.
  - (2) Kovacina, K.S. et al. (2003) *J Biol Chem* 278, 10189–94.
  - (3) Vander Haar, E. et al. (2007) *Nat Cell Biol* 9, 316–23.
  - (4) Sancak, Y. et al. (2007) *Mol Cell* 25, 903–15.



Western blot analysis of extracts from NIH/3T3 cells, serum-starved for 14 hours and then either left untreated or treated with insulin (150 nM) for 15 minutes, using Phospho-PRAS40 (Thr246) Antibody.



Western blot analysis of extracts from NIH/3T3 cells, serum-starved for 14 hours and then either left untreated or treated with insulin (150 nM) for 15 minutes, using Phospho-PRAS40 (Thr246) Antibody. The experiment was performed in the presence of phospho-peptide specific to phospho-PRAS40 (Thr246) (upper panel), the corresponding nonphospho-peptide (middle panel) and in the absence of any blocking peptide (lower panel).

Entrez-Gene ID # 84335  
Swiss-Prot Acc. # Q96B36

**Storage:** Supplied in 10mM HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.  
\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**  
Western Blotting 1:1000

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).  
Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine  
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.