

#2892 Store at -20°C

# Phospho-Torc2 (Ser171) Antibody

- Small 100 µl  
(10 Western mini-blot)
- Petite 40 µl  
(4 Western mini-blot)



**Orders** ■ 877-616-CELL (2355)  
 orders@cellsignal.com  
**Support** ■ 877-678-TECH (8324)  
 info@cellsignal.com  
**Web** ■ www.cellsignal.com

rev. 06/23/08

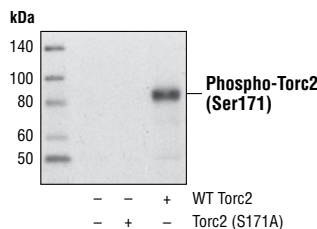
This product is for *in vitro* research use only and is not intended for use in humans or animals. This product is not intended for use as a therapeutic or in diagnostic procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Transfected	M, (H, R)	85 kDa	Rabbit**

**Background:** Glucose homeostasis is regulated by hormones and cellular energy status. Elevations of blood glucose during feeding stimulate insulin release from pancreatic β-cells through a glucose sensing pathway. Feeding also stimulates release of gut hormones such as glucagon-like peptide-1 (GLP-1), which further induces insulin release, inhibits glucagon release and promotes β-cell viability. CREB-dependent transcription likely plays a role in both glucose sensing and GLP-1 signaling (1). The protein Torc2 (transducer of regulated CREB activity 2) functions as a CREB co-activator (2,3) and is implicated in mediating the effects of these two pathways (4). In quiescent cells, Torc2 is phosphorylated at Ser171 and becomes sequestered in the cytoplasm via an interaction with 14-3-3 proteins. Glucose and gut hormones lead to the dephosphorylation of Torc2 and its dissociation from 14-3-3 proteins. Dephosphorylated Torc2 enters the nucleus to promote CREB-dependent transcription. Torc2 plays a key role in the regulation of hepatic gluconeogenic gene transcription in response to hormonal and energy signals during fasting (5). Torc1 and Torc3, a pair of Torc2-related proteins, also act as CREB co-activators (2,3). Torc1, Torc2 and Torc3 associate with the HTLV Tax protein to promote Tax-dependent transcription of HTLV-1 long terminal repeats (6,7).

**Specificity/Sensitivity:** Phospho-Torc2 (Ser171) Antibody detects transfected levels of Torc2 protein when phosphorylated on Ser171.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide (KLH-coupled) derived from the sequence of human Torc2. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from COS7 cells, untransfected or transfected with mouse wild-type (WT) Torc2 or mouse mutant (S171A) Torc2, using Phospho-Torc2 (Ser171) Antibody. Both of the above expression vectors were kindly provided by Dr. Marc Montminy at the Salk Institute for Biological Studies.

### Background References:

- Hinke, S.A. et al. (2004) *J. Physiol.* 558, 369–380.
- Conkright, M.D. et al. (2003) *Mol. Cell* 12, 413–423.
- Iourgenko, V. et al. (2003) *Proc. Natl. Acad. Sci. USA* 100, 12147–12152.
- Screaton, R.A. et al. (2004) *Cell* 119, 61–74.
- Koo, S.H. et al. (2005) *Nature* 437, 1109–1111.
- Koga, H. et al. (2004) *J. Biol. Chem.* 279, 52978–52983.
- Siu, Y.T. et al. (2006) *J. Virol.* 80, 7052–7059.

**Entrez-Gene ID** #200186  
**Swiss-Prot Acc.** #Q6UUV8

**Storage:** Supplied in 10 mM sodium 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).

### Companion Products:

- Torc2 Antibody #3826
- Torc1 Antibody #2501
- Torc1 (C71D11) Rabbit mAb #2587
- Torc3 Antibody #2768
- Torc3 (C35G4) Rabbit mAb #2720
- CBP Antibody #4772
- Phospho-CREB (Ser133) (87G3) Rabbit mAb #9198
- Phospho-CREB (Ser133) Antibody #9191
- Phospho-CREB (Ser133) (1B6) Mouse mAb #9196
- CREB (48H2) Rabbit mAb #9197
- CREB (86B10) Mouse mAb #9104
- CREB Control Cell Extracts #9193
- Phospho-CREB (Ser133) Blocking Peptide #1090
- PhosphoPlus® CREB (Ser133) Antibody Kit #9190
- Tris Buffered Saline with Tween 20 (TBST - 10X) #9997
- BSA #9998
- Nonfat Dry Milk #9999
- Phototope®-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7071
- Anti-rabbit IgG, HRP-linked Antibody #7074
- Prestained Protein Marker, Broad Range (Premixed Format) #7720
- Biotinylated Protein Ladder Detection Pack #7727
- 20X LumiGLO® Reagent and 20X Peroxide #7003

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—zebra fish B—bovine  
 Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% sequence homology.