

# TORC3 (A-12): sc-390712

## BACKGROUND

TORC3 (transducer of regulated cAMP response element-binding protein 3), also known as CRTC3 (CREB-regulated transcription coactivator 3), is a 619 amino acid protein that localizes to both the cytoplasm and the nucleus and belongs to the TORC family. Expressed in lung tissue and B and T lymphocytes, as well as in colon, brain, ovary, kidney, prostate, colon and heart, TORC3 functions as a transcriptional coactivator for CREB-1, thereby regulating the expression of CREB-activated genes, and is also thought to activate the SIK/TORC signaling pathway. TORC3 exists as multiple alternatively spliced isoforms and, in addition to its role in transcriptional activation, is thought to induce mitochondrial biogenesis, specifically in muscle cells.

## REFERENCES

1. Conkright, M.D., et al. 2003. TORCs: transducers of regulated CREB activity. *Mol. Cell* 12: 413-423.
2. Iourgenko, V., et al. 2003. Identification of a family of cAMP response element-binding protein coactivators by genome-scale functional analysis in mammalian cells. *Proc. Natl. Acad. Sci. USA* 100: 12147-12152.
3. Koga, H., et al. 2004. Enhanced activation of tax-dependent transcription of human T-cell leukemia virus type I (HTLV-I) long terminal repeat by TORC3. *J. Biol. Chem.* 279: 52978-52983.
4. Siu, Y.T., et al. 2006. TORC1 and TORC2 coactivators are required for tax activation of the human T-cell leukemia virus type 1 long terminal repeats. *J. Virol.* 80: 7052-7059.

## CHROMOSOMAL LOCATION

Genetic locus: CRTC3 (human) mapping to 15q26.1; Crtc3 (mouse) mapping to 7 D3.

## SOURCE

TORC3 (A-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 563-594 of TORC3 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TORC3 (A-12) is available conjugated to agarose (sc-390712 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390712 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390712 PE), fluorescein (sc-390712 FITC), Alexa Fluor® 488 (sc-390712 AF488), Alexa Fluor® 546 (sc-390712 AF546), Alexa Fluor® 594 (sc-390712 AF594) or Alexa Fluor® 647 (sc-390712 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390712 AF680) or Alexa Fluor® 790 (sc-390712 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390712 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

TORC3 (A-12) is recommended for detection of TORC3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TORC3 (A-12) is also recommended for detection of TORC3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TORC3 siRNA (h): sc-90206, TORC3 siRNA (m): sc-154556, TORC3 shRNA Plasmid (h): sc-90206-SH, TORC3 shRNA Plasmid (m): sc-154556-SH, TORC3 shRNA (h) Lentiviral Particles: sc-90206-V and TORC3 shRNA (m) Lentiviral Particles: sc-154556-V.

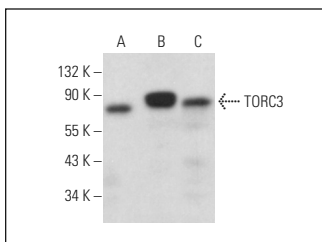
Molecular Weight of TORC3: 78 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, c4 whole cell lysate: sc-364186 or TORC3 (m): 293T Lysate: sc-127688.

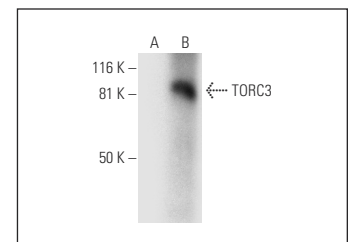
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



TORC3 (A-12): sc-390712. Western blot analysis of TORC3 expression in Hep G2 (A), c4 (B) and PC-12 (C) whole cell lysates.



TORC3 (A-12): sc-390712. Western blot analysis of TORC3 expression in non-transfected: sc-117752 (A) and mouse TORC3 transfected: sc-127688 (B) 293T whole cell lysates.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.