SANTA CRUZ BIOTECHNOLOGY, INC.

TORC3 (A-12): sc-390712

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

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_1 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).

STORAGE

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

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.

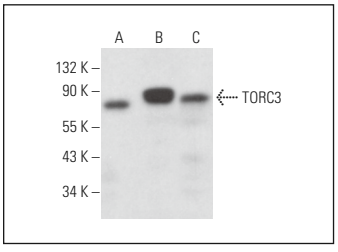
Molecular Weight of TORC3: 78 kDa.

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

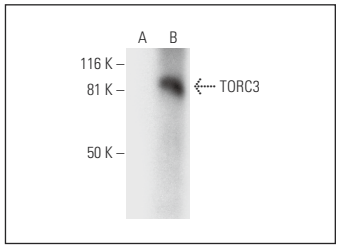
RECOMMENDED SUPPORT REAGENTS

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.

SELECT PRODUCT CITATIONS

1. Kim, S.H., et al. 2024. Targeting phosphorylation circuits on CREB and CRTCs as the strategy to prevent acquired skin hyperpigmentation. Int. J. Biol. Sci. 20: 312-330.

RESEARCH USE

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