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Antibodies to CREB Transcription factors (TORC-2)

Transducer of CREB protein 2 (TORC-2) antibodies. Catalog # TORC2-101AP, P-TORC2 and PC-TORC2.

Alternate Nomenclature: Accession # Q53ETO & Alternate Nomenclature: CREB-regulated transcription coactivator 2; Transducer of regulated cAMP response element-binding protein 2

Transducer of regulated cAMP response element-binding protein 2 (TORC-2) is a member of TORC family, the coactivators of the cAMP-responsive factor CREB; it is located at chromosome 1q21.3 (1). TORC-2 is a key regulator of fasting glucose metabolism. In mice, TORC-2 overexpression strongly induces glucose output in primary hepatocytes whereas knockdown of TORC-2 significantly reduces glucose output and gluconeogenic gene expression (2). TORC-2, along with other transcriptional regulators, regulates insulin receptor substrate 2 (IRS2) expression therefore limiting glucose output from the liver by inducing IRS2 (3). It may also contribute to the salutary effects of calorie restriction on glucose homeostasis in liver and other tissues (4). TORC-2 regulates the expression of specific genes such as the steroidogenic gene, StAR and, it is also a coactivator for TAX activation of the human T-cell leukemia virus type 1 long terminal repeats (5). Inhibition of TORC-2 inhibits cell cycle progression, cell proliferation, and anchorage dependent growth in MCF7 breast cancer and PC3 prostate cancer cells (6). Therefore, TORC-2 inhibitors might be useful for treating cancers. TORC-2 is highly expressed in thymus, HEK293T cells, insulinomas, spleen, ovary, muscle, lung and, B and T lymphocytes. TORC-2 is approximately an 85 kDa protein (693 amino acids). The PTORC2-selective antibodies were generated against purified Phosphorylated Transducer of CREB protein 2 (PTORC2). PTORC2-antibodies are affinity purified over immobilized antigen based chromatography, and the purified immunoglobulins are stabilized in antibody stabilization buffer. FabGennix Int. Inc., will also provide limited quantities of antigenic blocking protein for TORC2-101AP antibody. Antibodies to TORC2 (TORC2-101AP) will label ~85kDa protein in Western blot positive control samples for TORC2 and several other tissues. FabGennix Inc. will also conjugate antibodies with secondary enzymes (alk-Pase or HRP) or fluorescent probes upon request at nominal cost.

Catalog #	Host Species	Nature	Cross reactivity	Quantity	Volume
TORC2-101 AP	Rabbit	Affinity purified TORC2 antibodies	H, others n.d	100 ug	200ul
FITC-TORC2	Rabbit	FITC-conjugated TORC2 antibody	H, others n.d	100ug	200ul
P-TORC2	n/a	Antigenic blocking peptide for TORC2 -101AP	n/a	250 ug	100ul
PC-TORC2	n/a	Western blotting positive control for TORC2	n/a	For 5 appl	Inquire

R = rat; M = mouse; H = human; C = chicken; monk = monkey; * not all variants are labeled equally

Immunogen: Synthetic peptides corresponding to unique epitope on TORC2. The peptide sequence was unique to TORC2. The TORC2 peptide was covalently modified post-synthetically covalently modified to achieve desired antigenicity.

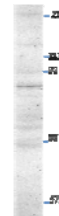
Concentration: TORC2 -101AP: IgG concentration 0.64-0.72 mg/ml in antibody stabilization buffer.

Applications: Antibody TORC2 -101AP is ideal for WB and ELISA applications, other applications have not been tested. These antibodies do not cross react to human lactoferrin, bovine lactoferrin or bovine serum albumin. The species cross reactivity for these antibodies have not been examined fully. The dilutions for this antibody is for reference only, investigators are expected to determine the optimal conditions for specific assay. WB: > 1:500; IMM & i.p pull-down assays: n.d; IHC n.d. ELISA <1:10,000. Application of this antibody in protocols not listed here does not necessarily exclude its use in such procedures.

Reactivity: This antibody detects a single band of approximately 85kDa in PC- TORC2 samples. The antibody does not cross react to....

Protocols: Standard protocol for various applications (WB; IMM and IHC) of this antibody is provided with the product specification sheet, however, FabGennix Inc., strongly recommends investigators to optimize conditions for use of this antibody in their laboratories.

Form/Storage: The antiserum is supplied in antibody stabilization buffer. The affinity-purified antibodies are isolated on immobilized antigen-affinity column and supplied as stabilized product. Store at -20°C for long-term storage. FabGennix Inc. does not recommend storage of very dilute antibody solutions unless they are prepared in specially formulated multi use antibody dilution buffer (Cat # DiluOBuffer). Working solutions of antibodies in DiluOBuffer should be filtered through 0.45um filter after every use for long-term storage.



Western Blot of TORC2-101AP with PC-TORC2. Antibody Dilution 1:500 in diluOBuffer

Notes: Briefly centrifuge to collect liquid, heat or boil PC-TORC2 tube for 1-2 minutes to dissolve any precipitate before use. This product is "ready-to-use" for electrophoresis. After thawing store at room temperature, Repeated freezing and thawing may result in appearance of higher MW immunoreactive bands.

New Reagents: Now you can recycle your western blots (nitrocellulose, supported membranes and PVDF membranes) by using our StripOBuffer (Cat FGI-1989). Each stripping is guaranteed to give better signal (up to 8 stripping). No strong pungent smell of reducing agents or heating required. Block in 5X diluOBuffer and you are ready for blotting with a new antibody

References:

1. Conkright MD, Canettieri G, Screaton R, Guzman E, Miraglia L, Hogenesch JB, Montminy M. TORCs: Transducers of Regulated CREB activity. *Molecular Cell*. August 2003; 12:413-423.
2. Dentin R, Hedrick S, Xie J, Yates J 3rd, Montminy M. Hepatic glucose sensing via the CREB coactivator CRT2. *Science*. 7 March 2008; 319(5868): 1402-1405.
3. Canettieri G, Koo SH, Berdeaux R, Heredia J, Hedrick S, Zhang X, Montminy M. Dual role of the coactivator TORC2 in modulating hepatic glucose output and insulin signaling. *Cell Metab*. November 2005; 2(5):331-338.
4. Koo SH, Flechner L, Qi L, Zhang X, Screaton RA, Jeffries S, Hedrick S, Xu W, Boussouar F, Brindle P, Takemori H, Montminy M. The CREB coactivator TORC2 is a key regulator of fasting glucose metabolism. *Nature*. 20 October 2005; 437(7062):1109-1111.
5. Siu YT, Chin KT, Siu KL, Yee Wai Choi E, Jeang KT, Jin DY. TORC1 and TORC2 coactivators are required for tax activation of the human T-cell leukemia virus type 1 long terminal repeats. *J. Virol*. 2006; 80(14):7052-7059.
6. Hietakangas V, Cohen SM. TOR complex 2 is needed for cell cycle progression and anchorage-independent growth of MCF7 and PC3 tumor cells. *BMC Cancer*. 3 October 2008; 8:282-290.

* For users who may require large amounts of TORC2-101AP, please enquire about bulk material discounts.
This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.

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