SANTA CRUZ BIOTECHNOLOGY, INC.

Cyclophilin 40 (C-11): sc-137216

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cyclophilins are conserved, ubiquitous and abundant cytosolic peptidyl-prolyl *cis-trans* isomerases that accelerate the isomerization of XaaPro peptide bonds and the refolding of proteins. Human cyclophilin A (CyPA), an intracellular protein of 165 amino acids, is the target of cyclosporin A (CsA) and is encoded by a single unique gene conserved from yeast to humans. Cyclophilin B (CyPB) is secreted in biological fluids such as blood or milk and binds to a specific receptor present on the human lymphoblastic cell line Jurkat and on human peripheral blood lymphocytes. Cyclophilin 40 (CyP40) is a widely expressed cytoplasmic protein that catalyzes the *cis-trans* isomerization of proline imidic peptide bonds in oligopeptides. It is a widely expressed cytoplasmic protein.

CHROMOSOMAL LOCATION

Genetic locus: PPID (human) mapping to 4q32.1; Ppid (mouse) mapping to 3 E3.

SOURCE

Cyclophilin 40 (C-11) is a mouse monoclonal antibody raised against amino acids 186-370 mapping at the C-terminus of Cyclophilin D of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cyclophilin 40 (C-11) is available conjugated to agarose (sc-137216 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-137216 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137216 PE), fluorescein (sc-137216 FITC), Alexa Fluor® 488 (sc-137216 AF488), Alexa Fluor® 546 (sc-137216 AF546), Alexa Fluor® 594 (sc-137216 AF594) or Alexa Fluor® 647 (sc-137216 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-137216 AF680) or Alexa Fluor® 790 (sc-137216 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Cyclophilin 40 (C-11) is recommended for detection of Cyclophilin 40 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).

Suitable for use as control antibody for Cyclophilin 40 siRNA (h): sc-44892, Cyclophilin 40 siRNA (m): sc-44893, Cyclophilin 40 shRNA Plasmid (h): sc-44892-SH, Cyclophilin 40 shRNA Plasmid (m): sc-44893-SH, Cyclophilin 40 shRNA (h) Lentiviral Particles: sc-44892-V and Cyclophilin 40 shRNA (m) Lentiviral Particles: sc-44893-V.

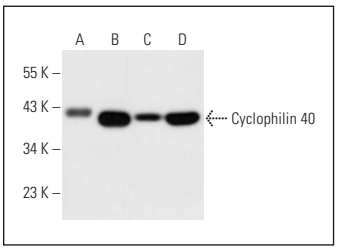
Molecular Weight of Cyclophilin 40: 41 kDa.

Positive Controls: JAR cell lysate: sc-2276, NIH/3T3 whole cell lysate: sc-2210 or Cyclophilin 40 (m): 293T Lysate: sc-119555.

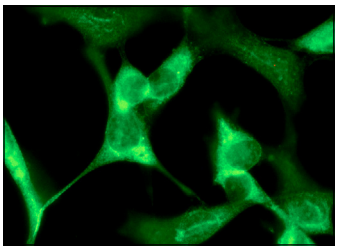
RECOMMENDED SUPPORT REAGENTS

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



Cyclophilin 40 (C-11): sc-137216. Western blot analysis of Cyclophilin 40 expression in non-transfected 293T: sc-117752 (**A**), mouse Cyclophilin 40 transfected 293T: sc-119555 (**B**), JAR (**C**) and NIH/3T3 (**D**) whole cell lysates.



Cyclophilin 40 (C-11): sc-137216. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Wei, L., et al. 2013. Oroxylin A induces dissociation of hexokinase II from the mitochondria and inhibits glycolysis by SIRT3-mediated deacetylation of Cyclophilin D in breast carcinoma. Cell Death Dis. 4: e601.
2. Song, S.B., et al. 2017. Modulation of mitochondrial membrane potential and ROS generation by nicotinamide in a manner independent of SIRT1 and mitophagy. Mol. Cells 40: 503-514.
3. Wang, C., et al. 2023. PFO5DoDA disrupts hepatic homeostasis primarily through glucocorticoid signaling inhibition. J. Hazard. Mater. 447: 130831.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.