SANTA CRUZ BIOTECHNOLOGY, INC.

Cyclophilin 40 (H-8): sc-137136

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.

REFERENCES

1. Kieffer, L.J., et al. 1993. Cyclophilin-40, a protein with homology to the P59 component of the steroid receptor complex. Cloning of the cDNA and further characterization. J. Biol. Chem. 268: 12303-12310.
2. Yokoi, H., et al. 1996. The structure and complete nucleotide sequence of the human Cyclophilin 40 (PPID) gene. Genomics 35: 448-455.

CHROMOSOMAL LOCATION

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

SOURCE

Cyclophilin 40 (H-8) 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_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Cyclophilin 40 (H-8) 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.

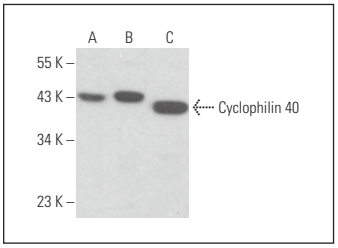
Molecular Weight of Cyclophilin 40: 41 kDa.

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

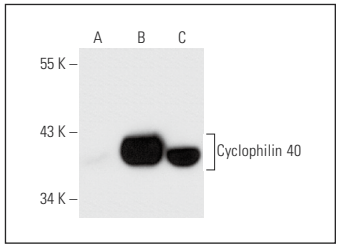
STORAGE

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

DATA



Cyclophilin 40 (H-8): sc-137136. Western blot analysis of Cyclophilin 40 expression in Sol8 nuclear extract (**A**) and JAR (**B**) and PC-12 (**C**) whole cell lysates.



Cyclophilin 40 (H-8): sc-137136. Western blot analysis of Cyclophilin 40 expression in non-transfected 293T: sc-117752 (**A**), mouse Cyclophilin 40 transfected 293T: sc-119555 (**B**) and NIH/3T3 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Chen, S.H., et al. 2014. Gemcitabine-induced pancreatic cancer cell death is associated with MST1/Cyclophilin D mitochondrial complexation. Biochimie 103: 71-79.
2. Sun, W.X., et al. 2015. Edaravone protects osteoblastic cells from dexamethasone through inhibiting oxidative stress and mPTP opening. Mol. Cell. Biochem. 409: 51-58.
3. Liang, J., et al. 2019. PGK1 depletion activates Nrf2 signaling to protect human osteoblasts from dexamethasone. Cell Death Dis. 10: 888.
4. Zheng, Y., et al. 2020. Four-octyl itaconate activates Nrf2 cascade to protect osteoblasts from hydrogen peroxide-induced oxidative injury. Cell Death Dis. 11: 772.
5. Xia, Y.C., et al. 2021. AMPK activation by ASP4132 inhibits non-small cell lung cancer cell growth. Cell Death Dis. 12: 365.
6. Zheng, Y.H., et al. 2021. A novel Keap1 inhibitor iKeap1 activates Nrf2 signaling and ameliorates hydrogen peroxide-induced oxidative injury and apoptosis in osteoblasts. Cell Death Dis. 12: 679.
7. Jin, L., et al. 2022. GNE-493 inhibits prostate cancer cell growth via Akt-mTOR-dependent and -independent mechanisms. Cell Death Discov. 8: 120.

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.