**BACKGROUND**

The immunosuppressant cyclosporin A (CsA) forms a trimolecular complex with cyclophilin and calcineurins to inhibit calcineurin phosphatase activity. 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 185 amino acids, is the target of the CsA and is encoded by a single unique gene conserved from yeast to humans. CyPA is known for its involvement in T cell differentiation and proliferation and is highly expressed in brain. CyPA is incorporated into the virion of the type 1 human immunodeficiency virus (HIV-1) via a direct interaction with the capsid domain of the viral Gag polyprotein and is crucial for efficient viral replication. Cyclophilin B (CyPB) is a member of the cyclophilin family with specific N- and C-terminal extensions. Unlike CyPA, CyPB has a signal sequence leading to its translocation in the endoplasmic reticulum. 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.

**CHROMOSOMAL LOCATION**

Genetic locus: PPIA (human) mapping to 7p13; Ppia (mouse) mapping to 11 A1.

**SOURCE**

CyPA (6-YD13) is a mouse monoclonal antibody raised against a full length recombinant CyPA protein of human origin.

**PRODUCT**

Each vial contains 100 µg IgGkappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

**APPLICATIONS**

CyPA (6-YD13) is recommended for detection of CyPA of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:10000), immunoprecipitation [1-2µg per 100-500µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CyPA siRNA (h): sc-105263, CyPA siRNA (m): sc-142741, CyPA shRNA Plasmid (h): sc-105263-SH, CyPA shRNA Plasmid (m): sc-142741-SH, CyPA shRNA (h) Lentiviral Particles: sc-105263-V and CyPA shRNA (m) Lentiviral Particles: sc-142741-V.

Molecular Weight of CyPA: 18 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, A-431 whole cell lysate: sc-2201 or HeLa whole cell lysate: sc-2200.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGkappa Light Chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin: sc-2003 or HeLa whole cell lysate: sc-2201.
2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

**STORAGE**

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

**DATA**

![Western blot analysis](image)

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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