

CyPA (H-24): sc-133494

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 165 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 (H-24) is a Protein A purified rabbit polyclonal antibody raised against synthetic C-terminus CyPA peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

CyPA (H-24) is recommended for detection of CyPA of mouse, rat, human and canine origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CyPA (H-24) is also recommended for detection of CyPA in additional species, including equine, bovine and canine.

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, Hep G2 cell lysate: sc-2227 or K-562 whole cell lysate: sc-2203.

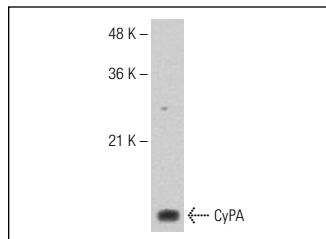
RESEARCH USE

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

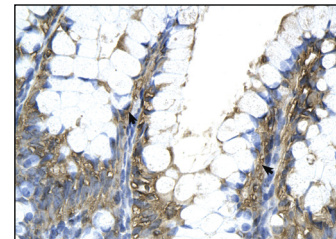
STORAGE

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

DATA



CyPA (H-24): sc-133494. Western blot analysis of CyPA expression in Hep G2 whole cell lysate.



CyPA (H-24): sc-133494. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human intestine tissue showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Wu, Y., et al. 2010. Downregulated expression of the secreted glycoprotein Follistatin-like 1 (Fstl1) is a robust hallmark of preadipocyte to adipocyte conversion. *Mech. Dev.* 127: 183-202.
2. Deleersnijder, A., et al. 2011. Comparative analysis of different peptidyl-prolyl isomerases reveals FK506-binding protein 12 as the most potent enhancer of α -synuclein aggregation. *J. Biol. Chem.* 286: 26687-26701.
3. Ross, H.H., et al. 2012. *In vivo* intermittent hypoxia elicits enhanced expansion and neuronal differentiation in cultured neural progenitors. *Exp. Neurol.* 235: 238-245.
4. Marcillac, F., et al. 2011. Nitric oxide induces the expression of the monocarboxylate transporter MCT4 in cultured astrocytes by a cGMP-independent transcriptional activation. *Glia* 59: 1987-1995.

PROTOCOLS

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Try **CyPA (6-YD13): sc-134310**, our highly recommended monoclonal alternative to CyPA (H-24).