

# PTPLA (F-12): sc-136825

## BACKGROUND

PTPLA (protein tyrosine phosphatase-like (proline instead of catalytic arginine), member A), also known as CAP (cementum attachment protein), is a 288 amino acid multi-pass membrane protein that is highly expressed in myocardium, and to a lesser extent in skeletal and smooth muscular tissues. PTPLA is a member of the protein tyrosine phosphatase (PTP) family of proteins, which are known to be signaling molecules that regulate signal transduction pathways leading to cell growth, differentiation and oncogenic transformation. PTPs mediate the dephosphorylation of phosphotyrosine. The tissue specific expression of PTPLA in the developing and adult heart suggests a role in regulating cardiac development and differentiation. PTPLA exist as 2 alternatively spliced isoforms and is encoded by a gene located on human chromosome 10, which houses over 1,200 genes and comprises nearly 4.5% of the human genome.

## CHROMOSOMAL LOCATION

Genetic locus: PTPLA (human) mapping to 10p12.33; Ptpla (mouse) mapping to 2 A1.

## SOURCE

PTPLA (F-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of PTPLA of mouse origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-136825 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PTPLA (F-12) is recommended for detection of PTPLA of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with PTPLAD2.

PTPLA (F-12) is also recommended for detection of PTPLA in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PTPLA siRNA (h): sc-90324, PTPLA siRNA (m): sc-152583, PTPLA shRNA Plasmid (h): sc-90324-SH, PTPLA shRNA Plasmid (m): sc-152583-SH, PTPLA shRNA (h) Lentiviral Particles: sc-90324-V and PTPLA shRNA (m) Lentiviral Particles: sc-152583-V.

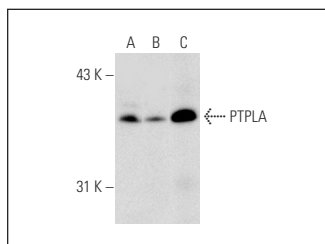
Molecular Weight of PTPLA: 32 kDa.

Positive Controls: Sol8 cell lysate: sc-2249, B16-F0 cell lysate: sc-2298 or M1 whole cell lysate: sc-364782.

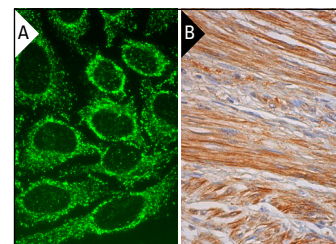
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



PTPLA (F-12): sc-136825. Western blot analysis of PTPLA expression in Sol8 (A), B16-F0 (B) and M1 (C) whole cell lysates.



PTPLA (F-12): sc-136825. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human smooth muscle tissue showing cytoplasmic staining of smooth muscle cells (B).

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.