

# PPA1 (42K-7): sc-100823

## BACKGROUND

PPA1 (pyrophosphate phospho-hydrolase 1), also known as IOPPP (inorganic pyrophosphatase), PP1, PP or PPase, belongs to the PPase family of inorganic pyrophosphatases. Inorganic pyrophosphatases catalyze the intracellular conversion of pyrophosphate to inorganic phosphate, a key reaction for phosphate metabolism in cells. PPA1 is a ubiquitously expressed protein that localizes to the cytoplasm and is required for cell growth. It exists as a homodimer exhibiting magnesium dependent activity. The binding of two magnesium ions is required to stimulate PPA1 activity; however, both subunits in the homodimer are capable of binding four magnesium ions. The additional ions are useful in forming complexes with substrates and products. In addition, the activity of PPA1 can be inhibited by calcium.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: PPA1 (human) mapping to 10q22.1; Ppa1 (mouse) mapping to 10 B4.

## SOURCE

PPA1 (42K-7) is a mouse monoclonal antibody raised against recombinant PPase of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

PPA1 (42K-7) is recommended for detection of PPA1 of mouse, rat and human 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PPA1 siRNA (h): sc-62850, PPA1 siRNA (m): sc-62851, PPA1 shRNA Plasmid (h): sc-62850-SH, PPA1 shRNA Plasmid (m): sc-62851-SH, PPA1 shRNA (h) Lentiviral Particles: sc-62850-V and PPA1 shRNA (m) Lentiviral Particles: sc-62851-V.

Molecular Weight of PPA1 monomer: 36 kDa.

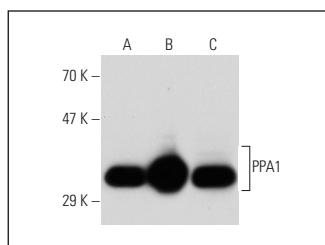
Molecular Weight of PPA1 homodimer: 70 kDa.

Positive Controls: PPA1 (m): 293T Lysate: sc-122727, A-431 whole cell lysate: sc-2201 or HeLa whole cell lysate: sc-2200.

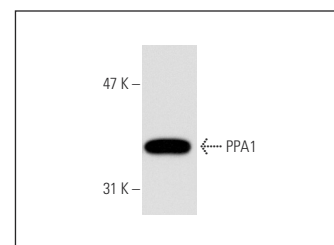
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-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).

## DATA



PPA1 (42K-7): sc-100823. Western blot analysis of PPA1 expression in non-transfected 293T: sc-117752 (A), mouse PPA1 transfected 293T: sc-122727 (B) and A-431 (C) whole cell lysates.



PPA1 (42K-7): sc-100823. Western blot analysis of PPA1 expression in A-431 whole cell lysate.

## 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) for detailed protocols and support products.