

CPI-17 (N-20): sc-17561

BACKGROUND

CPI-17 is a phosphorylation-dependent inhibitory protein for smooth muscle Myosin phosphate. CPI-17 was originally identified as a PKC-potentiated inhibitory protein of protein phosphatase-1, which is dominantly expressed in smooth muscle. Phosphorylation at Threonine 38, *in vitro*, by PKC or Rho-kinase enhances the inhibitory potency toward Myosin phosphatase. CPI-17 is also phosphorylated at Threonine 38 by protein kinase N and might be involved in the calcium sensitization of smooth muscle contraction as a downstream effector of Rho and/or arachidonic acid. CPI-17 is dually phosphorylated at Serine 12 and Threonine 38 by a MYPT-associated kinase, M110 kinase.

CHROMOSOMAL LOCATION

Genetic locus: PPP1R14A (human) mapping to 19q13.2; Ppp1r14a (mouse) mapping to 7 B1.

SOURCE

CPI-17 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CPI-17 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17561 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

CPI-17 (N-20) is recommended for detection of CPI-17 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)], 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 CPI-17 siRNA (h): sc-40423, CPI-17 siRNA (m): sc-40424, CPI-17 shRNA Plasmid (h): sc-40423-SH, CPI-17 shRNA Plasmid (m): sc-40424-SH, CPI-17 shRNA (h) Lentiviral Particles: sc-40423-V and CPI-17 shRNA (m) Lentiviral Particles: sc-40424-V.

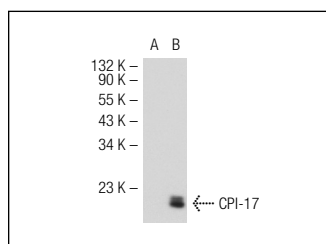
Molecular Weight of CPI-17: 17 kDa.

Positive Controls: CPI-17 (m): 293T Lysate: sc-126662, rat brain extract: sc-2392 or A549 cell lysate: sc-2413.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CPI-17 (N-20): sc-17561. Western blot analysis of CPI-17 expression in non-transfected: sc-117752 (A) and mouse CPI-17 transfected: sc-126662 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Ohama, T., et al. 2003. Chronic treatment with interleukin-1 β attenuates contractions by decreasing the activities of CPI-17 and MYPT-1 in intestinal smooth muscle. *J. Biol. Chem.* 278: 48794-48804.
- Ozaki, H., et al. 2003. Possible role of the protein kinase C/CPI-17 pathway in the augmented contraction of human myometrium after gestation. *Br. J. Pharmacol.* 140: 1303-1312.
- Sato, K., et al. 2007. Involvement of CPI-17 downregulation in the dysmotility of the colon from dextran sodium sulphate-induced experimental colitis in a mouse model. *Neurogastroenterol. Motil.* 19: 504-514.
- Mori, D., et al. 2011. Synchronous phosphorylation of CPI-17 and MYPT1 is essential for inducing Ca²⁺ sensitization in intestinal smooth muscle. *Neurogastroenterol. Motil.* 23: 1111-1122.
- Burmeister, D., et al. 2012. Impact of partial urethral obstruction on bladder function: time-dependent changes and functional correlates of altered expression of Ca²⁺ signaling regulators. *Am. J. Physiol. Renal Physiol.* 302: F1517-F1528.


 MONOS
Satisfaction
Guaranteed

Try **CPI-17 (F-4): sc-48406** or **CPI-17 (C-1): sc-365841**, our highly recommended monoclonal alternatives to CPI-17 (N-20).