

PP2A-B56- α (F-4): sc-271311

BACKGROUND

In eukaryotes, the phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions, including division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the protein phosphatases. In general, the protein phosphatase (PP) holoenzyme is a trimeric complex composed of a regulatory subunit, a variable subunit and a catalytic subunit. Four major families of protein phosphatase catalytic subunits have been identified, designated PP1, PP2A, PP2B (calcineurin) and PP2C. An additional protein phosphatase catalytic subunit, PPX (also known as PP4) is a putative member of a novel PP family. The PP2A family comprises subfamily members PP2A α and PP2A β . The PP2A catalytic subunit associates with a variety of regulatory subunits. Regulatory subunits include PP2A-A- α and -A- β , PP2A-B- α and -B- β , PP2A-C- α and -C- β , PP2A-B56- α , -B56- β , -B56- γ and -B56- δ .

CHROMOSOMAL LOCATION

Genetic locus: PPP2R5A (human) mapping to 1q32.3; Ppp2r5a (mouse) mapping to 1 H6.

SOURCE

PP2A-B56- α (F-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 459-486 at the C-terminus of PP2A-B56- α of human origin.

PRODUCT

Each vial contains 200 μ g IgG γ_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271311 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PP2A-B56- α (F-4) is recommended for detection of PP2A-B56- α of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 PP2A-B56- α siRNA (h): sc-39181, PP2A-B56- α siRNA (m): sc-39182, PP2A-B56- α siRNA (r): sc-270367, PP2A-B56- α shRNA Plasmid (h): sc-39181-SH, PP2A-B56- α shRNA Plasmid (m): sc-39182-SH, PP2A-B56- α shRNA Plasmid (r): sc-270367-SH, PP2A-B56- α shRNA (h) Lentiviral Particles: sc-39181-V, PP2A-B56- α shRNA (m) Lentiviral Particles: sc-39182-V and PP2A-B56- α shRNA (r) Lentiviral Particles: sc-270367-V.

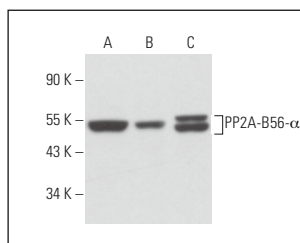
Molecular Weight of PP2A-B56- α : 56 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Caco-2 cell lysate: sc-2262 or PP2A-B56- α (h): 293T Lysate: sc-112024.

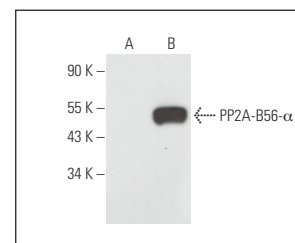
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



PP2A-B56- α (F-4): sc-271311. Western blot analysis of PP2A-B56- α expression in Caco-2 (A), HeLa (B) and MTE1D (C) whole cell lysates.



PP2A-B56- α (F-4): sc-271311. Western blot analysis of PP2A-B56- α expression in non-transfected: sc-117752 (A) and human PP2A-B56- α transfected: sc-112024 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Gergs, U., et al. 2019. Age-dependent protein expression of serine/threonine phosphatases and their inhibitors in the human cardiac atrium. *Adv. Med.* 2019: 2675972.
- Park, E.J., et al. 2023. Ssu72 phosphatase is essential for thermogenic adaptation by regulating cytosolic translation. *Nat. Commun.* 14: 1097.

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 for detailed protocols and support products.