SANTA CRUZ BIOTECHNOLOGY, INC.

Type II 4-phosphatase (F-19): sc-12319

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The inositol polyphosphate 4-phosphatases selectively remove the phosphate from the 4-position of various phosphatidylinositols, which generates second messengers in response to extracellular signals. Both the type I and type II 4-phosphatases catalyze the hydrolysis of phosphatidylinositol 3,4-bisphosphate, inositol 1,3,4-trisphosphate, and inositol 3,4-bisphosphate. Type I and type II 4-phosphatases are both alternatively spliced into two isoforms, α and β, which have been detected in human platelets, rat brain, heart, skeletal muscle and spleen; and all isoforms contain a conserved motif CKSAKDRT, which contains the active site consensus sequence C-X5-R. Both type I and II 4-phosphatases are thought to regulate the level of intracellular calcium by acting as signal terminating enzymes.

CHROMOSOMAL LOCATION

Genetic locus: INPP4B (human) mapping to 4q31.21; Inpp4b (mouse) mapping to 8 C2.

SOURCE

Type II 4-phosphatase (F-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Type II 4-phosphatase of human 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-12319 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Type II 4-phosphatase (F-19) is recommended for detection of Type II 4-phosphatase of human origin and Type II 4-phosphatase isoforms α and β of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Type II 4-phosphatase (F-19) is also recommended for detection of Type II 4-phosphatase in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Type II 4-phosphatase siRNA (h): sc-44178, Type II 4-phosphatase siRNA (m): sc-39093, Type II 4-phosphatase shRNA Plasmid (h): sc-44178-SH, Type II 4-phosphatase shRNA Plasmid (m): sc-39093-SH, Type II 4-phosphatase shRNA (h) Lentiviral Particles: sc-44178-V and Type II 4-phosphatase shRNA (m) Lentiviral Particles: sc-39093-V.

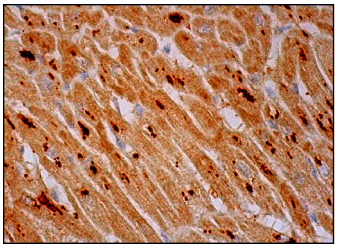
Molecular Weight of Type II 4-phosphatase: 106 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Type II 4-phosphatase (F-19): sc-12319. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes.

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 or our catalog for detailed protocols and support products.