

Type II 5-phosphatase (G-20): sc-12307

BACKGROUND

The inositol polyphosphate 5-phosphatases selectively remove the phosphate from the 5-position of various phosphatidylinositols, which generate second messengers in response to extracellular signals. The type I inositol polyphosphate 5-phosphatase is predominantly expressed in heart, brain, skeletal muscle, and human placenta. The 5-phosphatase associates with 14-3-3 ζ , and, in turn, activates the hydrolysis of inositol 1,4,5-trisphosphate and inositol 1,3,4,5-tetrakisphosphate. The type II inositol polyphosphate 5-phosphatase encodes a full length protein and a splice variant, which is the predominant form. The 5-phosphatase is ubiquitously expressed, and hydrolyzes inositol 1,4,5-trisphosphate, inositol 1,3,4,5-tetrakisphosphate, and phosphatidylinositol 4,5-bisphosphate. Both type I and II 5-phosphatases are thought to regulate the level of intracellular calcium by acting as signal terminating enzymes.

REFERENCES

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3. Speed, C.J., et al. 1995. Tissue distribution and intracellular localisation of the 75 kDa inositol polyphosphate 5-phosphatase. *Eur. J. Biochem.* 234: 216-224.
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CHROMOSOMAL LOCATION

Genetic locus: INPP5B (human) mapping to 1p34.3; Inpp5b (mouse) mapping to 4 D2.2.

SOURCE

Type II 5-phosphatase (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Type II 5-phosphatase of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-12307 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Type II 5-phosphatase (G-20) is recommended for detection of type II 5-phosphatase of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 Type II 5-phosphatase siRNA (h): sc-39096, Type II 5-phosphatase siRNA (m): sc-39097, Type II 5-phosphatase shRNA Plasmid (h): sc-39096-SH, Type II 5-phosphatase shRNA Plasmid (m): sc-39097-SH, Type II 5-phosphatase shRNA (h) Lentiviral Particles: sc-39096-V and Type II 5-phosphatase shRNA (m) Lentiviral Particles: sc-39097-V.

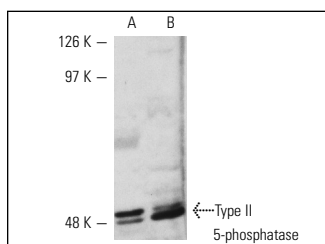
Molecular Weight of Type II 5-phosphatase fragments: 55-118 kDa.

Positive Controls: human platelet extract: sc-363773 or RAW 264.7 whole cell lysate: sc-2211.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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



Type II 5-phosphatase (G-20): sc-12307. Western blot analysis of Type II 5-phosphatase expression in human platelet extract (A) and RAW 264.7 (B) whole cell lysates.

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.