SANTA CRUZ BIOTECHNOLOGY, INC.

PHOSPHO2 (G-8): sc-398826

BACKGROUND

PHOSPHO2 (phosphatase, orphan 2), also known as pyridoxal phosphate phosphatase PHOSPHO2, is a 241 amino acid protein that belongs to the HAD-like hydrolase superfamily and the PHOSPHO family. PHOSPHO2 shares 42% sequence identity with PHOSPHO1, with both proteins containing three catalytic motifs conserved within the superfamily. PHOSPHO2 contains one PH domain, which mediates phosphoinositide binding. Encoded by a gene that maps to human chromosome 2q31.1, PHOSPHO2 exists as two alternatively spliced isoforms and exhibits high activity toward pyridoxal 5'-phosphate (PLP). PHOSPHO2 is also active at much lower levels toward pyrophosphate, phosphoethanolamine (PEA), phosphocholine (PCho), phospho-l-tyrosine, fructose-6-phosphate, PNNP and h-glycerophosphate.

REFERENCES

1. Gerhard, D.S., et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). Genome Res. 14: 2121-2127.
2. Grimwood, J., et al. 2004. The DNA sequence and biology of human chromosome 19. Nature 428: 529-535.
3. Roberts, S.J., et al. 2005. Probing the substrate specificities of human PHOSPHO1 and PHOSPHO2. Biochim. Biophys. Acta 1752: 73-82.
4. Oh, J.H., et al. 2005. Transcriptome analysis of human gastric cancer. Mamm. Genome 16: 942-954.
5. Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. Nature 434: 724-731.
6. Kimura, K., et al. 2006. Diversification of transcriptional modulation: large-scale identification and characterization of putative alternative promoters of human genes. Genome Res. 16: 55-65.

CHROMOSOMAL LOCATION

Genetic locus: PHOSPHO2 (human) mapping to 2q31.1; Phospho2 (mouse) mapping to 2 C2.

SOURCE

PHOSPHO2 (G-8) is a mouse monoclonal antibody raised against amino acids 1-52 mapping at the N-terminus of PHOSPHO2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PHOSPHO2 (G-8) is available conjugated to agarose (sc-398826 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398826 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398826 PE), fluorescein (sc-398826 FITC), Alexa Fluor® 488 (sc-398826 AF488), Alexa Fluor® 546 (sc-398826 AF546), Alexa Fluor® 594 (sc-398826 AF594) or Alexa Fluor® 647 (sc-398826 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398826 AF680) or Alexa Fluor® 790 (sc-398826 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PHOSPHO2 (G-8) is recommended for detection of PHOSPHO2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 PHOSPHO2 siRNA (h): sc-94280, PHOSPHO2 siRNA (m): sc-152232, PHOSPHO2 shRNA Plasmid (h): sc-94280-SH, PHOSPHO2 shRNA Plasmid (m): sc-152232-SH, PHOSPHO2 shRNA (h) Lentiviral Particles: sc-94280-V and PHOSPHO2 shRNA (m) Lentiviral Particles: sc-152232-V.

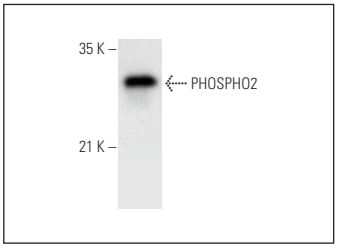
Molecular Weight of PHOSPHO2: 28 kDa.

Positive Controls: mouse testis extract: sc-2405.

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



PHOSPHO2 (G-8): sc-398826. Western blot analysis of PHOSPHO2 expression in mouse testis tissue extract.

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.