

Hint1 (B-5): sc-271790

BACKGROUND

Hint1 (histidine triad nucleotide binding protein 1), also known as PRKCNH1 or PKC11, is a 126 amino acid protein that localizes to both the cytoplasm and the nucleus and contains one HIT (histidine triad) domain. Widely expressed and existing as a homodimer, Hint1 functions to hydrolyze adenosine 5'-monophosphoramidate substrates, such as AMP-N-alanine methyl ester, AMP-morpholidate and AMP- α -acetyl lysine methyl ester, and may also inhibit PKC function and influence apoptosis. Knockdown of Hint1 mRNA results in downregulation of p53 and Bax, suggesting that Hint1 is a haplo-insufficient tumor suppressor. Also, it is suspected that promoter hypermethylation of the gene encoding Hint1 may play a role in hepatocarcinogenesis.

REFERENCES

- Pearson, J.D., et al. 1990. Amino acid sequence and characterization of a protein inhibitor of protein kinase C. *J. Biol. Chem.* 265: 4583-4591.
- Robinson, K. and Aitken, A. 1994. Identification of a new protein family which includes bovine protein kinase C inhibitor-1. *Biochem. J.* 304: 662-664.
- Brzoska, P.M., et al. 1996. Cloning, mapping, and *in vivo* localization of a human member of the PKC1-1 protein family (PRKCNH1). *Genomics* 36: 151-156.
- Lima, C.D., et al. 1996. Three-dimensional structure of human protein kinase C interacting protein 1, a member of the HIT family of proteins. *Proc. Natl. Acad. Sci. USA* 93: 5357-5362.
- Brenner, C. 2002. Hint, Fhit, and GalT: function, structure, evolution, and mechanism of three branches of the histidine triad superfamily of nucleotide hydrolases and transferases. *Biochemistry* 41: 9003-9014.

CHROMOSOMAL LOCATION

Genetic locus: HINT1 (human) mapping to 5q23.3; Hint1 (mouse) mapping to 11 B1.3.

SOURCE

Hint1 (B-5) is a mouse monoclonal antibody raised against amino acids 8-47 mapping near the N-terminus of Hint 1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Hint1 (B-5) is available conjugated to agarose (sc-271790 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271790 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271790 PE), fluorescein (sc-271790 FITC), Alexa Fluor[®] 488 (sc-271790 AF488), Alexa Fluor[®] 546 (sc-271790 AF546), Alexa Fluor[®] 594 (sc-271790 AF594) or Alexa Fluor[®] 647 (sc-271790 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271790 AF680) or Alexa Fluor[®] 790 (sc-271790 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Hint1 (B-5) is recommended for detection of Hint1 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 Hint1 siRNA (h): sc-92005, Hint1 siRNA (m): sc-145966, Hint1 shRNA Plasmid (h): sc-92005-SH, Hint1 shRNA Plasmid (m): sc-145966-SH, Hint1 shRNA (h) Lentiviral Particles: sc-92005-V and Hint1 shRNA (m) Lentiviral Particles: sc-145966-V.

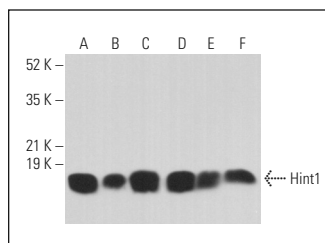
Molecular Weight of Hint1: 14 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, MOLT-4 cell lysate: sc-2233 or Hep G2 whole cell lysate: sc-2227.

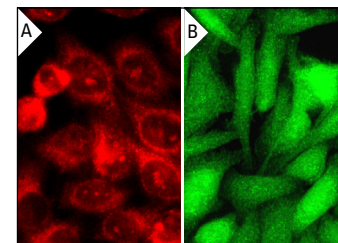
RECOMMENDED SUPPORT REAGENTS

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



Hint1 (B-5): sc-271790. Western blot analysis of Hint1 expression in Jurkat (A), Hep G2 (B), HEK293 (C), MOLT-4 (D), U-87 MG (E) and A549 (F) whole cell lysates. Detection reagent used: m-IgG κ BP-HRP: sc-516102.



Hint1 (B-5): sc-271790. Immunofluorescence staining of methanol-fixed HeLa (A) and SW480 (B) cells showing cytoplasmic localization.

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.