SANTA CRUZ BIOTECHNOLOGY, INC.

Sp110 (A-7): sc-376345

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Sp110 (speckled 110 kDa), also known as IPR1, VODI, IFI41 (interferon-induced protein 41, 30 kDa) or IFI75 (interferon-induced protein 75, 52 kDa), is a phosphoprotein belonging to the SP-100/SP140 family of nuclear body components. Sp110 contains an HSR domain, a PHD-type zinc finger, a SAND domain and a bromodomain and is believed to function as a transcriptional coactivator of nuclear hormone receptors. Induced by IFN-γ and all-*trans* retinoic acid, Sp110 participates in immunoprotective mechanisms against pathogens. Mutations in the gene encoding SP110 can lead to hepatic venoocclusive disease with immunodeficiency (VODI), a disease characterized by T and B cell immunodeficiency, absent tissue plasma cells, absent lymph node germinal centers and severe hypogammaglobulinemia. Due to alternative splicing events, five isoforms exist for Sp110. Isoform 3, also known as Sp110b, interacts with the Hep C Core Protein.

REFERENCES

1. Bloch, D.B., et al. 2000. Sp110 localizes to the PML-Sp100 nuclear body and may function as a nuclear hormone receptor transcriptional coactivator. Mol. Cell. Biol. 20: 6138-6146.
2. Regad, T., et al. 2001. Role and fate of PML nuclear bodies in response to interferon and viral infections. Oncogene 20: 7274-7286.
3. Watashi, K., et al. 2003. Modulation of retinoid signaling by a cytoplasmic viral protein via sequestration of Sp110b, a potent transcriptional corepressor of retinoic acid receptor, from the nucleus. Mol. Cell. Biol. 23: 7498-7509.
4. Hu, Y., et al. 2004. From mice to humans: identification of commonly deregulated genes in mammary cancer via comparative SAGE studies. Cancer Res. 64: 7748-7755.
5. Nicewonger, J., et al. 2004. Epstein-Barr virus (EBV) SM protein induces and recruits cellular Sp110b to stabilize mRNAs and enhance EBV lytic gene expression. J. Virol. 78: 9412-9422.

CHROMOSOMAL LOCATION

Genetic locus: Sp110 (mouse) mapping to 1 C5.

SOURCE

Sp110 (A-7) is a mouse monoclonal antibody raised against amino acids 61-242 mapping near the N-terminus of Sp110 of mouse 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.

Sp110 (A-7) is available conjugated to agarose (sc-376345 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376345 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376345 PE), fluorescein (sc-376345 FITC), Alexa Fluor® 488 (sc-376345 AF488), Alexa Fluor® 546 (sc-376345 AF546), Alexa Fluor® 594 (sc-376345 AF594) or Alexa Fluor® 647 (sc-376345 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376345 AF680) or Alexa Fluor® 790 (sc-376345 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Sp110 (A-7) is recommended for detection of Sp110 of mouse 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 Sp110 siRNA (m): sc-76543, Sp110 shRNA Plasmid (m): sc-76543-SH and Sp110 shRNA (m) Lentiviral Particles: sc-76543-V.

Molecular Weight of Sp110 isoforms 1/5: 78/62 kDa.

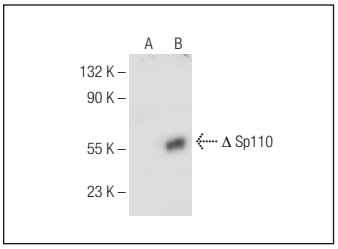
Molecular Weight of Sp110 isoforms IFI75/Sp110b/IFI41: 46/62/29 kDa.

Positive Controls: Sp110 (m): 293T Lysate: sc-123724.

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



Sp110 (A-7): sc-376345. Western blot analysis of Sp110 expression in non-transfected: sc-117752 (**A**) and truncated mouse Sp110 transfected: sc-123724 (**B**) 293T 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.