

Sp110 (B-10): sc-376741

BACKGROUND

Sp110 (speckled 110 kDa), also known as IPR1, VOD1, 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.

CHROMOSOMAL LOCATION

Genetic locus: SP110 (human) mapping to 2q37.1.

SOURCE

Sp110 (B-10) is a mouse monoclonal antibody raised against amino acids 216-455 mapping within an internal region of Sp110 of human origin.

PRODUCT

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

Sp110 (B-10) is available conjugated to agarose (sc-376741 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376741 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376741 PE), fluorescein (sc-376741 FITC), Alexa Fluor[®] 488 (sc-376741 AF488), Alexa Fluor[®] 546 (sc-376741 AF546), Alexa Fluor[®] 594 (sc-376741 AF594) or Alexa Fluor[®] 647 (sc-376741 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376741 AF680) or Alexa Fluor[®] 790 (sc-376741 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Sp110 (B-10) is recommended for detection of Sp110 of 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), 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).

Suitable for use as control antibody for Sp110 siRNA (h): sc-76542, Sp110 shRNA Plasmid (h): sc-76542-SH and Sp110 shRNA (h) Lentiviral Particles: sc-76542-V.

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

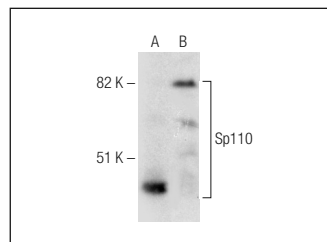
Molecular Weight of Sp110 isoforms IFI75/Sp110b/IFI41: 46/62/29 kDa.

Positive Controls: HL-60 nuclear extract: sc-2147, Jurkat whole cell lysate: sc-2204 or HeLa nuclear extract: sc-2120.

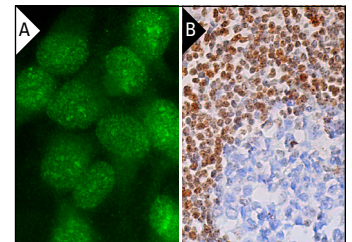
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Sp110 (B-10): sc-376741. Western blot analysis of Sp110 expression in HL-60 (A) and HeLa (B) nuclear extracts.



Sp110 (B-10): sc-376741. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear staining of cells in non-germinal center. Blocked with 0.25X UltraCruz[®] Blocking Reagent: sc-516214. Detection reagents used: m-IgG κ BP-B: sc-516142 and ImmunoCruz[®] ABC Kit: sc-516216 (B).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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