

Sp110 (m): 293T Lysate: sc-123724

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 co-activator 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-SP-100 nuclear body and may function as a nuclear hormone receptor transcriptional coactivator. *Mol. Cell. Biol.* 20: 6138-6146.
2. Regad, T. and Chelbi-Alix, M.K. 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.
6. Warren, E.H., et al. 2006. An antigen produced by splicing of noncontiguous peptides in the reverse order. *Science* 313: 1444-1447.
7. Thye, T., et al. 2006. No associations of human pulmonary tuberculosis with Sp110 variants. *J. Med. Genet.* 43: e32.
8. Roscioli, T., et al. 2006. Mutations in the gene encoding the PML nuclear body protein Sp110 are associated with immunodeficiency and hepatic veno-occlusive disease. *Nat. Genet.* 38: 620-622.
9. de la Fuente, J., et al. 2007. Sp110 transcription is induced and required by *Anaplasma phagocytophilum* for infection of human promyelocytic cells. *BMC Infect. Dis.* 7: 110.

CHROMOSOMAL LOCATION

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

PRODUCT

Sp110 (m): 293T Lysate represents a lysate of mouse Sp110 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

Sp110 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Sp110 antibodies. Recommended use: 10-20 μ l per lane.

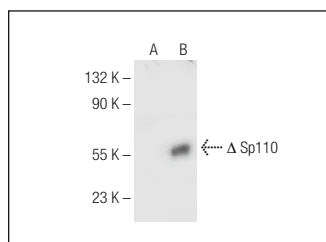
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Sp110 (A-7): sc-376345 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Sp110 expression in Sp110 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

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 -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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.