

Spir-2 (G-5): sc-398427

BACKGROUND

Spir-2 (spire homolog 2), also known as SPIRE2, is a 714 amino acid protein belonging to the spire family. Spir-2 is a cytoplasmic protein that contains one KIND domain and three WH2 domains. Spir-2 binds to Actin via the WH2 domains and acts as an Actin nucleation factor. Spir-2 is involved in vesicle transport and acts as a link between Actin organization and intracellular transport. Spir-2 is expressed as four isoforms that are produced by alternative splicing events. The gene that encodes Spir-2 maps to human chromosome 16, which encodes over 900 genes and approximately 90 million base pairs, making up nearly 3% of human cellular DNA. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, though through the CREBBP gene which encodes a critical CREB binding protein. Signs of Rubinstein-Taybi include mental retardation and predisposition to tumor growth and white blood cell neoplasias. Crohn's disease is a gastrointestinal inflammatory condition associated with chromosome 16 through the NOD2 gene.

REFERENCES

1. Ben Hamida, C., et al. 1997. Homozygosity mapping of giant axonal neuropathy gene to chromosome 16q24.1. *Neurogenetics* 1: 129-133.
2. Karlsson, J., et al. 2003. Novel quantitative trait loci controlling development of experimental autoimmune encephalomyelitis and proportion of lymphocyte subpopulations. *J. Immunol.* 170: 1019-1026.
3. Forabosco, P., et al. 2006. Meta-analysis of genome-wide linkage studies of systemic lupus erythematosus. *Genes Immun.* 7: 609-614.
4. Carneiro, L.A., et al. 2007. Nod-like receptors in innate immunity and inflammatory diseases. *Ann. Med.* 39: 581-593.

CHROMOSOMAL LOCATION

Genetic locus: SPIRE2 (human) mapping to 16q24.3.

SOURCE

Spir-2 (G-5) is a mouse monoclonal antibody raised against amino acids 196-242 mapping within an internal region of Spir-2 of human origin.

PRODUCT

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

Spir-2 (G-5) is available conjugated to agarose (sc-398427 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398427 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398427 PE), fluorescein (sc-398427 FITC), Alexa Fluor® 488 (sc-398427 AF488), Alexa Fluor® 546 (sc-398427 AF546), Alexa Fluor® 594 (sc-398427 AF594) or Alexa Fluor® 647 (sc-398427 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398427 AF680) or Alexa Fluor® 790 (sc-398427 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Spir-2 (G-5) is recommended for detection of Spir-2 of 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 Spir-2 siRNA (h): sc-93231, Spir-2 shRNA Plasmid (h): sc-93231-SH and Spir-2 shRNA (h) Lentiviral Particles: sc-93231-V.

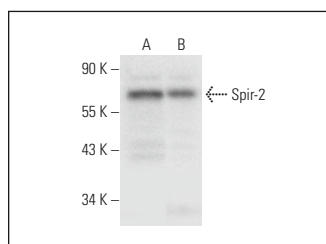
Molecular Weight of Spir-2: 80 kDa.

Positive Controls: Daoy whole cell lysate: sc-364381, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

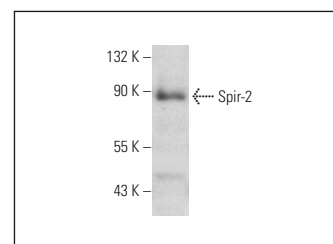
RECOMMENDED SUPPORT REAGENTS

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



Spir-2 (G-5): sc-398427. Western blot analysis of Spir-2 expression in Hep G2 (A) and Daoy (B) whole cell lysates.



Spir-2 (G-5): sc-398427. Western blot analysis of Spir-2 expression in HeLa whole cell lysate.

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.