SANTA CRUZ BIOTECHNOLOGY, INC.

Seipin (L-16): sc-55987

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Seipin, also known as BSCL2 (Bernardinelli-Seip congenital lipodystrophy 2), HMN5, SPG17 or GNG3LG, is a 400 amino acid transmembrane protein that localizes to the endoplasmic reticulum (ER). Highly expressed in testis and brain, Seipin is involved in proper neuronal connections and in maintaining ER stability. Defects in the gene encoding Seipin are the cause of three distinct disorders: Berardinelli-Seip congenital lipodystrophy type 2 (BSCL), Silver spastic paraplegia syndrome (SSPS) and distal hereditary motor neurop-athy type V (DSMAV). BSCL is a rare disorder characterized by an absence of adipose tissue and severe Insulin resistance. SSPS and DSMAV are both neurological disorders that cause hereditary spastic paraparesis and the degeneration of motor nerve fibers, respectively. Three isoforms of Seipin exist due to alternative splicing events.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606158. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
2. Windpassinger, C., et al. 2004. Heterozygous missense mutations in BSCL2 are associated with distal hereditary motor neuropathy and Silver syndrome. Nat. Genet. 36: 271-276.
3. Agarwal, A.K., et al. 2004. Seipin: a mysterious protein. Trends Mol. Med. 10: 440-444.
4. Raygada, M., et al. 2005. Congenital generalized lipodystrophy: profile of the disease and gender differences in two siblings. Clin. Genet. 67: 98-101.
5. Auer-Grumbach, M., et al. 2005. Phenotypes of the N88S Berardinelli-Seip congenital lipodystrophy 2 mutation. Ann. Neurol. 57: 415-424.
6. Capeau, J., et al. 2005. Diseases of adipose tissue: genetic and acquired lipodystrophies. Biochem. Soc. Trans. 33: 1073-1077.

CHROMOSOMAL LOCATION

Genetic locus: BSCL2 (human) mapping to 11q12.3; Bscl2 (mouse) mapping to 19 A.

SOURCE

Seipin (L-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Seipin of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-55987 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Seipin (L-16) is recommended for detection of Seipin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), 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).

Seipin (L-16) is also recommended for detection of Seipin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Seipin siRNA (h): sc-62990, Seipin siRNA (m): sc-62991, Seipin shRNA Plasmid (h): sc-62990-SH, Seipin shRNA Plasmid (m): sc-62991-SH, Seipin shRNA (h) Lentiviral Particles: sc-62990-V and Seipin shRNA (m) Lentiviral Particles: sc-62991-V.

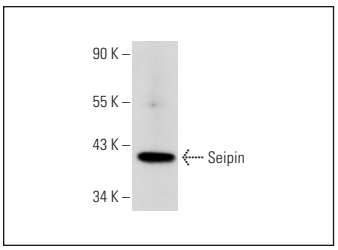
Molecular Weight of Seipin: 45 kDa.

Positive Controls: human spinal cord tissue extract.

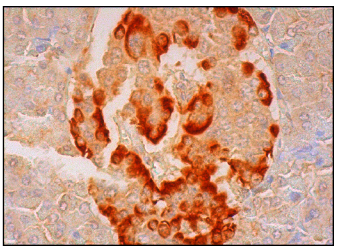
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecip-itation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immuno-histochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Seipin (L-16): sc-55987. Western blot analysis of Seipin expression in human spinal cord tissue extract.



Seipin (L-16): sc-55987. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans.

RESEARCH USE

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

PROTOCOLS

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