

S3-12 (N-14): sc-169231

BACKGROUND

S3-12 (Adipocyte protein S3-12), also known as PLIN4 (Perilipin-4), is a 1,357 amino acid protein that belongs to the Perilipin family. S3-12 contains a repeated 33 amino acid motif also found in adipophilin, and it shares protein sequence identity to both adipophilin and TIP-47 in the COOH terminus, but not to Perilipin. S3-12 exhibits sequence similarity to the PAT proteins. Upregulated during adipocyte differentiation, S3-12 may play a role in triacylglycerol packaging into adipocytes, and functions as a coat protein involved in the biogenesis of lipid storage droplets. S3-12 demonstrates highest expression in skeletal muscle, followed by heart and liver, and lowest expression in adult whole brain. Existing as two alternatively spliced isoforms, the S3-12 gene is conserved in canine, bovine and mouse, and maps to human chromosome 19p13.3.

REFERENCES

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2. Wolins, N.E., et al. 2003. Adipocyte protein S3-12 coats nascent lipid droplets. *J. Biol. Chem.* 278: 37713-37721.
3. Dalen, K.T., et al. 2004. Adipose tissue expression of the lipid droplet-associated proteins S3-12 and Perilipin is controlled by peroxisome proliferator-activated receptor- γ . *Diabetes* 53: 1243-1252.
4. Grimwood, J., et al. 2004. The DNA sequence and biology of human chromosome 19. *Nature* 428: 529-535.
5. Kimmel, A.R., et al. 2010. Adoption of Perilipin as a unifying nomenclature for the mammalian PAT-family of intracellular lipid storage droplet proteins. *J. Lipid Res.* 51: 468-471.
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CHROMOSOMAL LOCATION

Genetic locus: PLIN4 (human) mapping to 19p13.3.

SOURCE

S3-12 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of S3-12 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-169231 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

S3-12 (N-14) is recommended for detection of S3-12 of human origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for S3-12 siRNA (h): sc-97544, S3-12 shRNA Plasmid (h): sc-97544-SH and S3-12 shRNA (h) Lentiviral Particles: sc-97544-V.

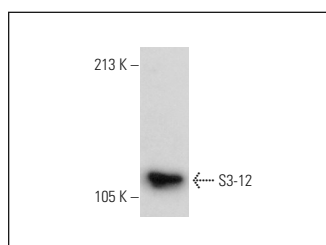
Molecular Weight of S3-12 isoforms: 134/141 kDa.

Positive Controls: RT-4 whole cell lysate: sc-364257.

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) Immunoprecipitation: 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.

DATA



S3-12 (N-14): sc-169231. Western blot analysis of S3-12 expression in RT-4 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 or our catalog for detailed protocols and support products.