**BACKGROUND**

The Lipin family of nuclear proteins contains three members: Lipin-1, Lipin-2, and Lipin-3, all of which contain a nuclear signal sequence, a highly conserved amino-terminal (NLIP) domain and a carboxy-terminal (CLIP) domain. Lipin-1 is crucial for normal adipose tissue development and metabolism. Lipin-1 selectively activates a subset of PGC-1α target pathways, including fatty acid oxidation and mitochondrial oxidative phosphorylation, by inducing expression of the nuclear receptor PPARα. Lipin-1 also inactivates the lipogenic program and suppresses circulating lipid levels. Lipin-2 is linked to Majeed syndrome, an autosomal recessive, autoimmune disorder. Lipin-3 is an 851 amino acid protein that localizes to the nucleus. Lipin-3 observations are useful in studies related to adipose tissue development in the context of obesity, fatty liver dystrophy, lipodystrophy, Insulin resistance and type 2 diabetes.

**REFERENCES**


**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-50056 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

**APPLICATIONS**

Lipin-3 (C-19) is recommended for detection of Lipin-3 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Lipin-3 (C-19) is also recommended for detection of Lipin-3 in additional species, including equine, canine, bovine and porcine.


Molecular Weight of Lipin-3: 94 kDa.

Positive Controls: mouse heart extract: sc-2254.

**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: 1:2000-1:1000) 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 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) or donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-Texas Red: sc-2783 (dilution range: 1:100-1:400).

**DATA**

Lipin-3 (C-19): sc-50056. Western blot analysis of Lipin-3 expression in mouse heart tissue extract.

**STORAGE**

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