**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. An abundance of Lipin-1 promotes fat accumulation and insulin sensitivity, whereas a deficiency in Lipin-1 may deter normal adipose tissue development, resulting in insulin resistance and lipodystrophy, a heterogeneous group of disorders characterized by loss of body fat, fatty liver, hyperglycemia and insulin resistance.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: LPIN1 (human) mapping to 2p25.1; Lpin1 (mouse) mapping to 546-680 mapping within an internal region of Lipin-1 of human origin.

**SOURCE**

Lipin-1 (B-12) is a mouse monoclonal antibody raised against amino acids 261-380 mapping within an internal region of Lipin-1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgGκ, kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Lipin-1 (B-12) is available conjugated to agarose (sc-376874 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376874 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycocerythrin (sc-376874 PE), fluorescein (sc-376874 FITC), Alexa Fluor® 488 (sc-376874 AF488), Alexa Fluor® 546 (sc-376874 AF546), Alexa Fluor® 594 (sc-376874 AF594) or Alexa Fluor® 647 (sc-376874 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM, and to either Alexa Fluor® 680 (sc-376874 AF680) or Alexa Fluor® 790 (sc-376874 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**RESEARCH USE**

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

**APPLICATIONS**

Lipin-1 (B-12) is recommended for detection of Lipin-1 of mouse, rat and 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 Lipin-1 siRNA (h): sc-60940, Lipin-1 siRNA (m): sc-60941, Lipin-1 shRNA Plasmid (h): sc-60940-SH, Lipin-1 shRNA Plasmid (m): sc-60941-SH, Lipin-1 siRNA (h) Lentiviral Particles: sc-60940-V and Lipin-1 shRNA (m) Lentiviral Particles: sc-60941-V.

Molecular Weight of Lipin-1: 102 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or AN3 CA cell lysate: sc-24662.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG HRP (sc-516102 or m-IgG 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-IgG HRP: sc-60940 (0.5 ml agarose/2.0 ml).

**DATA**

- Lipin-1 (B-12): sc-376874 Western blot analysis of Lipin-1 expression in Jurkat whole cell lysate.
- Lipin-1 (B-12): sc-376874 Western blot analysis of Lipin-1 expression in AN3 CA whole cell lysate.

**SELECT PRODUCT CITATIONS**


**STORAGE**

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