BACKGROUND

SMPDL3B (sphingomyelin phosphodiesterase, acid-like 3B), also known as ASMLP3 or ASML3B (acid sphingomyelinase-like phosphodiesterase 3B), is a 455 amino acid secreted protein belonging to the acid sphingomyelinase family. It is expressed in granulosa cells of the ovarian follicle and is a homolog of ASM (acid sphingomyelinase). ASM is a lysosomal protein that hydrolyzes sphingomyelin to ceramide and phosphocholine playing an important role in apoptosis of germ cell lines. Deficiency of ASM is associated with type A and type B Niemann-Pick disease. Type A is a fatal neurodegenerative disorder seen in infancy and resulting in death by age three, whereas type B is a non-neuropathic disease with a later onset.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: SMPDL3B (human) mapping to 1p35.3; Smpdl3b (mouse) mapping to 4 D2.3.

SOURCE

SMPDL3B (B-1) is a mouse monoclonal antibody raised against amino acids 196-271 mapping within an internal region of SMPDL3B of human origin.

PRODUCT

Each vial contains 200 µg IgG1 lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

SMPDL3B (B-1) is recommended for detection of SMPDL3B 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 SMPDL3 siRNA (h): sc-76525, SMPDL3 siRNA (m): sc-76526, SMPDL3 shRNA Plasmid (h): sc-76525-SH, SMPDL3 shRNA Plasmid (m): sc-76526-SH, SMPDL3 shRNA (h) Lentiviral Particles: sc-76525-V and SMPDL3 shRNA (m) Lentiviral Particles: sc-76526-V.

Molecular Weight of SMPDL3B: 51 kDa.

Positive Controls: SMPDL3B (m2): 293T Lysate: sc-126022.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG λ BP-HRP: sc-516132 or m-IgG λ BP-HRP (Cruz Marker): sc-516132-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-2084. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 [0.5 ml agarose/2.0 ml].

DATA

SMPDL3B (B-1): sc-376870. Western blot analysis of SMPDL3B expression in non-transfected: sc-117752 (A) and mouse SMPDL3B transfected: sc-128022 (B) 293T whole cell lysates.

SMPDL3B (B-1): sc-376870. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

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.