

# SMPDL3B (F-20): sc-68821

## BACKGROUND

SMPDL3B (sphingomyelin phosphodiesterase, acid-like 3B), also known as ASMLPD 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

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- Schuchman, E.H., Suchi, M., Takahashi, T., Sandhoff, K. and Desnick, R.J. 1991. Human acid sphingomyelinase. Isolation, nucleotide sequence and expression of the full-length and alternatively spliced cDNAs. *J. Biol. Chem.* 266: 8531-8539.
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- Langmann, T., Buechler, C., Ries, S., Schaeffler, A., Aslanidis, C., Schuierer, M., Weiler, M., Sandhoff, K., de Jong, P.J. and Schmitz, G. 1999. Transcription factors Sp1 and AP-2 mediate induction of acid sphingomyelinase during monocytic differentiation. *J. Lipid Res.* 40: 870-880.

## CHROMOSOMAL LOCATION

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

## SOURCE

SMPDL3B (F-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SMPDL3B 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-68821 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SMPDL3B (F-20) is recommended for detection of SMPDL3B 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).

SMPDL3B (F-20) is also recommended for detection of SMPDL3B in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for SMPDL3B siRNA (h): sc-76525, SMPDL3B siRNA (m): sc-76526, SMPDL3B shRNA Plasmid (h): sc-76525-SH, SMPDL3B shRNA Plasmid (m): sc-76526-SH, SMPDL3B shRNA (h) Lentiviral Particles: sc-76525-V and SMPDL3B shRNA (m) Lentiviral Particles: sc-76526-V.

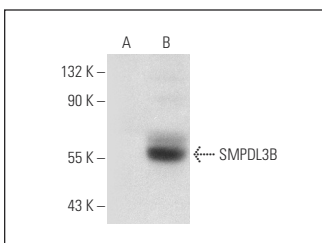
Molecular Weight of SMPDL3B: 51 kDa.

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

## 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



SMPDL3B (F-20): sc-68821. Western blot analysis of SMPDL3B expression in non-transfected: sc-117752 (A) and mouse SMPDL3B transfected: sc-126022 (B) 293T whole cell lysates.

## 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.