

# SPPase1 (G-20): sc-55305

## BACKGROUND

Sphingosine-1-phosphate (S1P) is a lipid that functions in a variety of intracellular and extracellular biological events. The intracellular activity of S1P is regulated by its state of phosphorylation and is therefore controlled by SPP kinases (SphKs) and S1P phosphatases (SPPases). The mammalian SPPases belong to the type 2 lipid phosphate phosphatase family of N-ethylmaleimide insensitive, magnesium-independent, multi-pass membrane proteins. Characteristic of their family, SPPases contain three conserved motifs that comprise the active site of the enzyme: the SXH motif, the KXXXXXXRP motif and the SRXXXXHXXD motif. SPPase1, also known as SGPP1 or SPP1, localizes to the membrane of the endoplasmic reticulum (ER) and is ubiquitously expressed with highest levels found in kidney and placenta. SPPase1 specifically dephosphorylates S1P, dihydro-S1P and phyto-S1P. The overexpression of SPPases can lead to an elevation in the levels of ceramide and can induce apoptosis.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: Sgpp1 (mouse) mapping to 12 C3.

## SOURCE

SPPase1 (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SPPase1 of mouse 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-55305 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

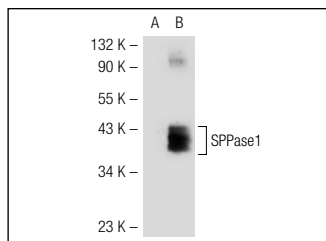
SPPase1 (G-20) is recommended for detection of SPPase1 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SPPase1 siRNA (m): sc-63061, SPPase1 shRNA Plasmid (m): sc-63061-SH and SPPase1 shRNA (m) Lentiviral Particles: sc-63061-V.

Molecular Weight of SPPase1: 49 kDa.

Positive Controls: SPPase1 (m): 293T Lysate: sc-123749.

## DATA



SPPase1 (G-20): sc-55305. Western blot analysis of SPPase1 expression in non-transfected: sc-117752 (A) and mouse SPPase1 transfected: sc-123749 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Gao, X.Y., Li, L., Wang, X.H., Wen, X.Z., Ji, K., Ye, L., Cai, J., Jiang, W.G. and Ji, J.F. 2015. Inhibition of sphingosine-1-phosphate phosphatase 1 promotes cancer cells migration in gastric cancer: clinical implications. *Oncol. Rep.* 34: 1977-1987.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.