

# IMP5 (S-14): sc-164667

## BACKGROUND

Intramembrane proteolysis is now widely recognized as an important physiological pathway required for reverse signaling and membrane protein degradation. Aspartyl intramembrane cleaving proteases of the GXGD-type play an important regulatory role in health and disease. Signal peptide peptidase (SPP) and SPP-like (SPPL) peptidases, such as SPPL2a, SPPL2b, IMP5, and SPPL3, belong to the family of GXGD aspartic proteases. The putative catalytic domains of SPP and SPPLs are embedded in membranes in an orientation predisposed to cleave type II oriented transmembrane proteins. IMP5 (intramembrane protease 5), also known as SPPL2c (signal peptide peptidase-like 2C), is a 690 amino acid multi-pass membrane protein that may act as an intramembrane protease. IMP5 also belongs to the peptidase A22B family and two isoforms are produced by alternative splicing events.

## REFERENCES

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4. Friedmann, E., et al. 2004. Consensus analysis of signal peptide peptidase and homologous human aspartic proteases reveals opposite topology of catalytic domains compared with presenilins. *J. Biol. Chem.* 279: 50790-50798.
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7. Flührer, R., et al. 2006. A  $\gamma$ -secretase-like intramembrane cleavage of TNF $\alpha$  by the GxGD aspartyl protease SPPL2b. *Nat. Cell Biol.* 8: 894-896.
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## CHROMOSOMAL LOCATION

Genetic locus: 4933407P14Rik (mouse) mapping to 11 E1.

## SOURCE

IMP5 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of IMP5 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-164667 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

IMP5 (S-14) is recommended for detection of IMP5 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with IMP3 or IMP4.

Suitable for use as control antibody for IMP5 siRNA (m): sc-146228, IMP5 shRNA Plasmid (m): sc-146228-SH and IMP5 shRNA (m) Lentiviral Particles: sc-146228-V.

Molecular Weight of IMP5: 75 kDa.

Positive Controls: c4 whole cell lysate.

## 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) 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.

## 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.