

# SKI-1 (A-11): sc-271916

## BACKGROUND

Mammalian serine proteases function as proprotein convertases, processing inactive precursors to produce active peptides and proteins. SKI-1 (subtilisin/kexin-isozyme-1) is a type I membrane-bound  $\text{Ca}^{2+}$ -dependent serine protease. SKI-1 is related to bacterial subtilisin and yeast kexin. Subtilisin is an alkaline serine protease produced by *Bacillus subtilis* 168. Kexin is a pro-hormone-processing enzyme, which is encoded by the KEX2 gene of the yeast *Saccharomyces cerevisiae*. SKI-1 is present in most tissues and cells, and it is most concentrated in liver and thyroid tissues. SKI-1 has been shown to cleave the brain-derived neurotrophic factor (BDNF) precursor to produce the mature form of BDNF.

## CHROMOSOMAL LOCATION

Genetic locus: MBTPS1 (human) mapping to 16q23.3; Mbtps1 (mouse) mapping to 8 E1.

## SOURCE

SKI-1 (A-11) is a mouse monoclonal antibody raised against a peptide mapping near the N-terminus of SKI-1 of rat origin.

## PRODUCT

Each vial contains 200  $\mu\text{g}$  IgM lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271916 P, (100  $\mu\text{g}$  peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## APPLICATIONS

SKI-1 (A-11) is recommended for detection of SKI-1 precursor of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu\text{g}$  per 100-500  $\mu\text{g}$  of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 SKI-1 siRNA (h): sc-36496, SKI-1 siRNA (m): sc-36497, SKI-1 shRNA Plasmid (h): sc-36496-SH, SKI-1 shRNA Plasmid (m): sc-36497-SH, SKI-1 shRNA (h) Lentiviral Particles: sc-36496-V and SKI-1 shRNA (m) Lentiviral Particles: sc-36497-V.

Molecular Weight of SKI-1 precursor: 148 kDa.

Molecular Weight of SKI-1 membrane-bound isoforms: 120/106 kDa.

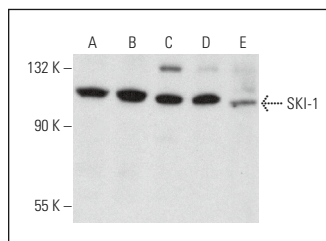
Molecular Weight of secreted SKI-1: 98 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, NIH/3T3 whole cell lysate: sc-2210 or PC-12 cell lysate: sc-2250.

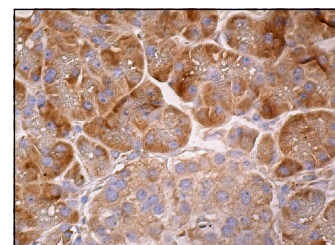
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\lambda$  BP-HRP: sc-516132 or m-IgG $\lambda$  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-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\lambda$  BP-FITC: sc-516185 or m-IgG $\lambda$  BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\lambda$  BP-HRP: sc-516132 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



SKI-1 (A-11): sc-271916. Western blot analysis of SKI-1 expression in Hep G2 (A), IMR-32 (B), c4 (C), NIH/3T3 (D) and PC-12 (E) whole cell lysates.



SKI-1 (A-11): sc-271916. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS

- Kim, J.Y., et al. 2018. ER stress drives lipogenesis and steatohepatitis via caspase-2 activation of S1P. *Cell* 175: 133-145.e15.
- Wu, B., et al. 2021. The TGF- $\beta$  superfamily cytokine Activin-A is induced during autoimmune neuroinflammation and drives pathogenic Th17 cell differentiation. *Immunity* 54: 308-323.e6.
- Kim, J.Y., et al. 2022. PIDDosome-SCAP crosstalk controls high-fructose-diet-dependent transition from simple steatosis to steatohepatitis. *Cell Metab.* 34: 1548-1560.e6.

## 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) for detailed protocols and support products.