## SANTA CRUZ BIOTECHNOLOGY, INC.

# Punctin (PU29Z): sc-74258



## BACKGROUND

Punctin, also known as Punctin-1 or ADAMTS-like protein-1 (ADAMTSL-1), is a secreted, glycosylated protein belonging to the ADAMTS family of metalloproteases. Unlike the typical ADAMTS protein, Punctin lacks the disintegrinlike and metalloproteinase domains. Punctin consists of a signal peptide, four Thrombospondin type-1 repeats (TSRs), a cysteine-rich domain and a spacer region. O-fucosylation of the TSR repeats regulates the secretion of Punctin. Punctin is closely related to the larger ADAMTS-like protein Punctin-2, and both are similar to the invertebrate protein Papilin. Punctin is expressed in skeletal muscle, localizing to the extracellular matrix, and it plays a significant role in extracellular matrix turnover. Two isoforms exist for Punctin due to alternative splicing. Isoform 1 is the full length mature protein. Isoform 2 lacks amino acids 362-378 and 457-525 and contains a distinct sequence for amino acids 448-456.

### REFERENCES

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- Boerboom, D., Russell, D.L., Richards, J.S. and Sirois, J. 2003. Regulation of transcripts encoding ADAMTS-1 (a disintegrin and metalloproteinase with Thrombospondin-like motifs-1) and progesterone receptor by human chorionic gonadotropin in equine preovulatory follicles. J. Mol. Endocrinol. 31: 473-485.
- Hall, N.G., Klenotic, P., Anand-Apte, B. and Apte, S.S. 2003. ADAMTSL-3/ Punctin-2, a novel glycoprotein in extracellular matrix related to the ADAMTS family of metalloproteases. Matrix Biol. 22: 501-510.
- Valerio, A., Ferrario, M., Martinez, F.O., Locati, M., Ghisi, V., Bresciani, L.G., Mantovani, A. and Spano, P. 2004. Gene expression profile activated by the chemokine CCL5/RANTES in human neuronal cells. J. Neurosci. Res. 78: 371-382.
- 5. Wight, T.N. 2004. The ADAMTS proteases, extracellular matrix, and vascular disease: waking the sleeping giant(s)! Arterioscler. Thromb. Vasc. Biol. 25: 12-14.
- Porter, S., Clark, I.M., Kevorkian, L. and Edwards, D.R. 2005. The ADAMTS metalloproteinases. Biochem. J. 386: 15-27.

#### CHROMOSOMAL LOCATION

Genetic locus: ADAMTSL1 (human) mapping to 9p22.2.

## SOURCE

Punctin (PU29Z) is a mouse monoclonal antibody raised against full length recombinant Punctin of human origin.

## **STORAGE**

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/ thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

#### PRODUCT

Each vial contains 100  $\mu g~lg G_{2b}$  in 1.0 ml of PBS with < 0.1% sodium azide and protein stabilizer.

## **APPLICATIONS**

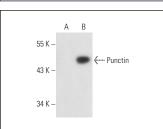
Punctin (PU29Z) is recommended for detection of Punctin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Punctin siRNA (h): sc-76297, Punctin shRNA Plasmid (h): sc-76297-SH and Punctin shRNA (h) Lentiviral Particles: sc-76297-V.

Molecular Weight of Punctin: 59 kDa.

Positive Controls: Punctin (h): 293T Lysate: sc-114698.

#### DATA



Punctin (PU29Z): sc-74258. Western blot analysis of Punctin expression in non-transfected: sc-117752 (**A**) and human Punctin transfected: sc-114698 (**B**) 293T whole cell lysates.

#### **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.