# SANTA CRUZ BIOTECHNOLOGY, INC.

# Latexin (199CT6.1.2): sc-517339



# BACKGROUND

Latexin, also designated endogenous carboxypeptidase inhibitor (ECI) or tissue carboxypeptidase inhibitor (TCI), belongs to the protease inhibitor I47 family of proteins. Latexin acts as a non-competitive, reversible inhibitor for metallocarboxypeptidases (MCPs), including CPA1, CPA2 and CPA4. It is a cytoplasmic protein that is highly expressed in heart, prostate, pancreas, ovary, kidney, brain and colon. Latexin consists of two topologically equivalent subdomains that bind to MCPs with low specificity, which gives it with the flexibility to inhibit all vertebrate A/B MCPs. Latexin is involved in the transmission of pain and plays a role in inflammation.

## **REFERENCES**

- 1. Uratani, Y., Takiguchi-Hayashi, K., Miyasaka, N., Sato, M., Jin, M. and Arimatsu, Y. 2000. Latexin, a carboxypeptidase A inhibitor, is expressed in rat peritoneal mast cells and is associated with granular structures distinct from secretory granules and lysosomes. Biochem. J. 346: 817-826.
- 2. Liu, Q., Yu, L., Gao, J., Fu, Q., Zhang, J., Zhang, P., Chen, J. and Zhao, S. 2001. Cloning, tissue expression pattern and genomic organization of Latexin, a human homologue of rat carboxypeptidase A inhibitor. Mol. Biol. Rep. 27: 241-246.
- 3. Takiguchi-Hayashi, K. 2001. In vitro clonal analysis of rat cerebral cortical neurons expressing Latexin, a subtype-specific molecular marker of glutamatergic neurons. Brain Res. 132: 87-90.
- 4. Aagaard, A., Listwan, P., Cowieson, N., Huber, T., Ravasi, T., Wells, C.A., Flanagan, J.U., Kellie, S., Hume, D.A., Kobe, B. and Martin, J.L. 2005. An inflammatory role for the mammalian carboxypeptidase inhibitor Latexin: relationship to cystatins and the tumor suppressor TIG1. Structure 13: 309-317.
- 5. García-Castellanos, R., Bonet-Figueredo, R., Pallares, I., Ventura, S., Avilés, F.X., Vendrell, J. and Gomis-Rütha, F.X. 2005. Detailed molecular comparison between the in the zymogen state and by the endogenous inhibitor Latexin. Cell. Mol. Life Sci. 62: 1996-2014.
- 6. Pallarès, I., Bonet, R., García-Castellanos, R., Ventura, S., Aviles, F.X., Vendrell, J. and Gomis-Rüth, F.X. 2005. Structure of human carboxypeptidase A4 with its Latexin. Proc. Nat. Acad. Sci. USA 102: 3978-3983.
- 7. Jin, M., Ishida, M., Katoh-Fukui, Y., Tsuchiya, R., Higashinakagawa, T., Ikegami, S. and Arimatsu, Y. 2006. Reduced pain sensitivity in mice lacking Latexin, an inhibitor of metallocarboxypeptidases. Brain Res.1075: 117-121.

# **CHROMOSOMAL LOCATION**

Genetic locus: LXN (human) mapping to 3q25.32; Lxn (mouse) mapping to 3 E1.

#### SOURCE

Latexin (199CT6.1.2) is a mouse monoclonal antibody raised against a recombinant protein corresponding to Latexin of human origin.

# **PRODUCT**

Each vial contains 100 µg lgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

# **APPLICATIONS**

Latexin (199CT6.1.2) is recommended for detection of Latexin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for Latexin siRNA (h): sc-60917, Latexin siRNA (m): sc-60918, Latexin shRNA Plasmid (h): sc-60917-SH, Latexin shRNA Plasmid (m): sc-60918-SH, Latexin shRNA (h) Lentiviral Particles: sc-60917-V and Latexin shRNA (m) Lentiviral Particles: sc-60918-V.

Molecular Weight of Latexin: 29 kDa.

Positive Controls: AT-3 whole cell lysate, mouse brain extract: sc-2253 or rat brain extract: sc-2392.

#### **RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG K BP-HRP: sc-516102 or m-IgG K BP-HRP (Cruz Marker): sc-516102-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 A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

# DATA



Latexin (199CT6.1.2): sc-517339. Western blot analysis of Latexin expression in AT-3 whole cell lysate (A) and mouse brain (B) and rat brain (C) tissue extracts.

#### **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 for detailed protocols and support products.