

# Latexin (C-12): sc-47087

## 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 metalloproteinases (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., et al. 2000. Latexin, a carboxypeptidase  $\alpha$  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., et al. 2001. Cloning, tissue expression pattern and genomic organization of Latexin, a human homologue of rat carboxypeptidase  $\alpha$  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. Dev. Brain Res.* 132: 87-90.
4. Aagaard, A., et al. 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., et al. 2005. Detailed molecular comparison between the inhibition mode of A/B-type carboxypeptidases in the zymogen state and by the endogenous inhibitor Latexin. *Cell. Mol. Life Sci.* 62: 1996-2014.
6. Pallarès, I., et al. 2005. Structure of human carboxypeptidase A4 with its endogenous protein inhibitor, Latexin. *Proc. Natl. Acad. Sci. USA* 102: 3978-3983.
7. Jin, M., et al. 2006. Reduced pain sensitivity in mice lacking Latexin, an inhibitor of metalloproteinases. *Brain Res.* 1075: 117-121.

## CHROMOSOMAL LOCATION

Genetic locus: LXN (human) mapping to 3p25.32; Lxn (mouse) mapping to 3 E1.

## SOURCE

Latexin (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Latexin of human 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-47087 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Latexin (C-12) 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), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

Latexin (C-12) is also recommended for detection of Latexin in additional species, including bovine and porcine.

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.

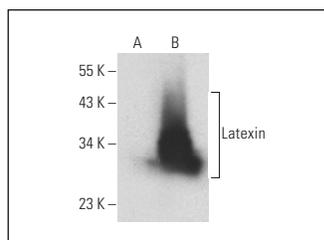
Molecular Weight of Latexin: 29 kDa.

Positive Controls: Latexin (h): 293T Lysate: sc-177464, mouse brain extract: sc-2253 or rat brain extract: sc-2392.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



Latexin (C-12): sc-47087. Western blot analysis of Latexin expression in non-transfected: sc-117752 (A) and human Latexin transfected: sc-177464 (B) 293T whole cell lysates.

## 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.