SANTA CRUZ BIOTECHNOLOGY, INC.

Latexin (K-15): sc-47089

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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., et al. 2000. Latexin, a carboxypeptidase α 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 α 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 metallocarboxypeptidases. Brain Res. 1075: 117-121.

CHROMOSOMAL LOCATION

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

SOURCE

Latexin (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Latexin of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-47089 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Latexin (K-15) 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), 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 (K-15) is also recommended for detection of Latexin in additional species, including equine, canine, 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: IMR-32 cell lysate: sc-2409, 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) 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 or our catalog for detailed protocols and support products.