

Angiotensinase C (Y-15): sc-49274

BACKGROUND

Angiotensinase C, also designated lysosomal Pro-X carboxypeptidase or prolylcarboxypeptidase, belongs to the peptidase S28 family. Angiotensinase C which is highly expressed in placenta, lung and liver and is also expressed in heart, pancreas, kidney and brain, is a cell matrix-associated prekallikrein (PK) activator. Angiotensin II, a substrate of Angiotensinase C, is involved in regulating blood pressure and electrolyte balance, suggesting that the gene encoding for Angiotensinase C may be related to essential hypertension, a condition involving high blood pressure with no known cause. Angiotensinase C cleaves off the C-terminal amino acids linked to proline in peptides such as Angiotensin II, III and des-Arg9-bradykinin. The cleavage occurs at an acidic pH, but with some substrates enzymatic activity is retained at a neutral pH.

REFERENCES

1. Suga, K., et al. 1995. Prolylcarboxypeptidase (angiotensinase C): purification and characterization of the enzyme from *Xanthomanas maltophilia*. *Biosci. Biotechnol. Biochem.* 59: 298-301.
2. Watson, B., et al. 1997. The human angiotensinase C gene maps to 11q14 within 700 kb of D11S901: a candidate gene for essential hypertension. *Genomics* 44: 365-736.
3. Shariat-Madar, Z., et al. 2002. Identification and characterization of prolylcarboxypeptidase as an endothelial cell prekallikrein activator. *J. Biol. Chem.* 277: 17962-17969.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 176785. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Shariat-Madar, Z., et al. 2004. Recombinant prolylcarboxypeptidase activates plasma prekallikrein. *Blood* 103: 4554-4561.
6. Shariat-Madar, Z., et al. 2005. Overexpression on Chinese hamster ovary cells. *Am. J. Physiol. Heart Circ. Physiol.* 289: H2697-H2703.

CHROMOSOMAL LOCATION

Genetic locus: PRCP (human) mapping to 11q14.1; Prcp (mouse) mapping to 7 E1.

SOURCE

Angiotensinase C (Y-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Angiotensinase C 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-49274 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Angiotensinase C (Y-15) is recommended for detection of Angiotensinase C 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).

Angiotensinase C (Y-15) is also recommended for detection of Angiotensinase C in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Angiotensinase C siRNA (h): sc-60170, Angiotensinase C siRNA (m): sc-60171, Angiotensinase C shRNA Plasmid (h): sc-60170-SH, Angiotensinase C shRNA Plasmid (m): sc-60171-SH, Angiotensinase C shRNA (h) Lentiviral Particles: sc-60170-V and Angiotensinase C shRNA (m) Lentiviral Particles: sc-60171-V.

Molecular Weight of Angiotensinase C: 56 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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.

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.