

Angiotensinase C (T-15): sc-49272

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 (T-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus 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-49272 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 (T-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), immunoprecipitation [1-2 µg per 100-500 µg 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).

Angiotensinase C (T-15) is also recommended for detection of Angiotensinase C in additional species, including equine 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.

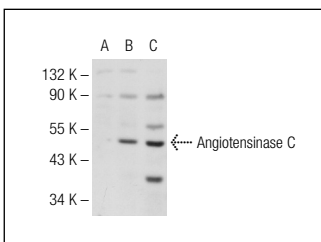
Molecular Weight of Angiotensinase: 56 kDa.

Positive Controls: Angiotensinase C (h2): 293T Lysate: sc-170413 or 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) 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



Angiotensinase C (T-15): sc-49272. Western blot analysis of Angiotensinase C expression in non-transfected 293T: sc-117752 (A), human Angiotensinase C transfected 293T: sc-170413 (B) and HeLa (C) whole cell lysates.

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.