

# CSTL1 (G-15): sc-85510

## BACKGROUND

The cystatin superfamily is a well-established family of cysteine protease inhibitors. All true cystatins inhibit cysteine peptidases of the papain family, such as cathepsins, while some also inhibit legumain family enzymes. The CRES (cystatin-related epididymal spermatogenic) protein defines a new subgroup in the family 2 cystatins of the cystatin superfamily. CRES proteins lack two of the three consensus sites necessary for the cystatin inhibition of C1 cysteine proteases. They are also preferentially expressed in postmeiotic germ cells, the proximal caput epididymidis, and anterior pituitary gonadotrophs. Therefore, CRES proteins may perform unique and tissuespecific functions in the reproductive and neuroendocrine systems. As a member of the CRES subfamily, Cystatin-like 1 (CSTL1) is a 145 amino acid protein and is expressed in testis.

## REFERENCES

- Saitoh, E., Isemura, S., Sanada, K., Kim, H.S., Smithies, O. and Maeda, N. 1988. Cystatin superfamily. Evidence that family II cystatin genes are evolutionarily related to family III cystatin genes. *Biol. Chem. Hoppe-Seyler* 369: 191-197.
- Cornwall, G.A. and Hsia, N. 2002. Cres (cystatin-related epididymal spermatogenic) gene regulation and function. *Zhonghua Nan Ke Xue* 8: 313-318.
- Cornwall, G.A. and Hsia, N. 2003. A new subgroup of the family 2 cystatins. *Mol. Cell. Endocrinol.* 200: 1-8.
- Xue, X., Qiu, S.M., Qiu, S.D., Zhang, Q.Y. and Tian, H. 2006. Effects of experimental varicocele on CRES protein in the testis and epididymis of adolescent rats. *Zhonghua Nan Ke Xue* 12: 974-978.
- Yuan, Q., Guo, Q.S., Cornwall, G.A., Xu, C. and Wang, Y.F. 2007. Age-dependent expression of the cystatin-related epididymal spermatogenic (Cres) gene in mouse testis and epididymis. *Asian J. Androl.* 9: 305-311.
- Cornwall, G.A., von Horsten, H.H., Swartz, D., Johnson, S., Chau, K. and Whelly, S. 2007. Extracellular quality control in the epididymis. *Asian J. Androl.* 9: 500-507.
- von Horsten, H.H., Johnson, S.S., SanFrancisco, S.K., Hastert, M.C., Whelly, S.M. and Cornwall, G.A. 2007. Oligomerization and transglutaminase cross-linking of the cystatin CRES in the mouse epididymal lumen: potential mechanism of extracellular quality control. *J. Biol. Chem.* 282: 32912-32923.
- Frygeliuss, J., Oscarson, M., Nordqvist, K., Wedell, A. and Töhönen, V. 2007. The reproductive tissue specific cystatin subgroup of genes: expression during gonadal development in wildtype and testatin knockout animals. *Sex Dev.* 1: 363-372.

## CHROMOSOMAL LOCATION

Genetic locus: CSTL1 (human) mapping to 20p11.21.

## SOURCE

CSTL1 (G-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of CSTL1 of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85510 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CSTL1 (G-15) is recommended for detection of CSTL1 of 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).

CSTL1 (G-15) is also recommended for detection of CSTL1 in additional species, including canine.

Suitable for use as control antibody for CSTL1 siRNA (h): sc-77041, CSTL1 shRNA Plasmid (h): sc-77041-SH and CSTL1 shRNA (h) Lentiviral Particles: sc-77041-V.

Molecular Weight of CSTL1: 17 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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](http://www.scbt.com) or our catalog for detailed protocols and support products.