



# SZABO SCANDIC

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Diagnostik & molekulare Diagnostik



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### Zuschläge

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- Expressversand

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# cystatin C (m): 293T Lysate: sc-126695

## BACKGROUND

Cystatin C is a cysteine (thiol) protease inhibitor that belongs to the type II cystatin gene superfamily and is the most abundant extracellular inhibitor of cysteine proteases. Cystatin C is a constitutively secreted, amyloidogenic protein, which forms a two-fold symmetric dimer and modulates both cysteine protease activity and the expression of class II MHC molecules. Expression of cystatin C is an indicator of kidney function and glomerular filtration rate. Mutations in the cystatin C gene can lead to protein aggregates, which are implicated in hereditary amyloid angiopathy (HCAA) and cerebral hemorrhage. Although both wildtype and mutant cystatin C are capable of forming concentration dependent inactive dimers, mutant cystatin C dimerizes at lower concentrations and is more susceptible to serine proteases, which may facilitate aggregation. In neuronal cells, oxidative stress stimulates expression of cystatin C, which may positively regulate apoptosis.

## REFERENCES

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2. Nishio, C., Yoshida, K., Nishiyama, K., Hatanaka, H. and Yamada, M. 2000. Involvement of cystatin C in oxidative stress-induced apoptosis of cultured rat CNS neurons. *Brain Res.* 873: 252-262.
3. Manoury, B., Gregory, W.F., Maizels, R.M. and Watts, C. 2001. Bm-CPI-2, a cystatin homolog secreted by the filarial parasite *Brugia malayi*, inhibits class II MHC-restricted antigen processing. *Curr. Biol.* 11: 447-451.
4. Janowski, R., Kozak, M., Jankowska, E., Grzonka, Z., Grubb, A., Abrahamson, M. and Jaskolski, M. 2001. Human cystatin C, an amyloidogenic protein, dimerizes through three-dimensional domain swapping. *Nat. Struct. Biol.* 8: 316-320.
5. Aras, O., Tsai, M.Y., Hanson, N.Q., Bailey, R., Rao, G. and Hunninghake, D.B. 2001. Cystatin C is an independent predictor of fasting and post-methionine load total homocysteine concentrations among stable renal transplant recipients. *Clin. Chem.* 47: 1263-1268.
6. Calero, M., Pawlik, M., Soto, C., Castano, E.M., Sigurdsson, E.M., Kumar, A., Gallo, G., Frangione, B. and Levy, E. 2001. Distinct properties of wildtype and the amyloidogenic human cystatin C variant of hereditary cerebral hemorrhage with amyloidosis, Icelandic type. *J. Neurochem.* 77: 628-637.

## CHROMOSOMAL LOCATION

Genetic locus: Cst3 (mouse) mapping to 2 G3.

## PRODUCT

cystatin C (m): 293T Lysate represents a lysate of mouse cystatin C transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

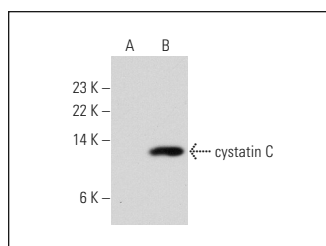
## APPLICATIONS

cystatin C (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive cystatin C antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

cystatin C (T12): sc-73879 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse cystatin C expression in cystatin C transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## DATA



cystatin C (T12): sc-73879. Western blot analysis of cystatin C expression in non-transfected: sc-117752 (A) and mouse cystatin C transfected: sc-126695 (B) 293T whole cell lysates.

## 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) for detailed protocols and support products.