



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# cathepsin A (h): 293 Lysate: sc-159813

## BACKGROUND

The cathepsin family of proteolytic enzymes include several diverse classes of proteases. Cathepsins B, L, H, K, S and O comprise the cysteine protease class. Cathepsins D and E comprise the aspartate protease class. The serine protease class includes cathepsin G. Cathepsins function in cellular metabolism and participate in peptide biosynthesis and protein degradation. Cathepsin A, a serine carboxypeptidase, exists in a high molecular weight lysosomal complex with  $\beta$ -galactosidase ( $\beta$ -Gal) and  $\alpha$ -neuraminidase (Neu1). Cathepsin A functions to protect  $\beta$ -Gal and Neu1 from intralysosomal proteolysis. Deficiencies in cathepsin A lead to deficiencies in  $\beta$ -Gal and Neu1. The gene encoding human cathepsin A maps to chromosome 20q13.12. Mutations in this gene cause galactosialidosis, a lysosomal storage disorder resulting from the  $\beta$ -Gal and Neu1 deficiencies.

## REFERENCES

1. Wiegant, J., Galjart, N.J., Raap, A.K. and d'Azzo, A. 1991. The gene encoding human protective protein (PPGB) is on chromosome 20. *Genomics* 10: 345-349.
2. Heusel, J.W., Scarpati, E.M., Jenkins, N.A., Gilbert, D.J., Copeland, N.G., Shapiro, S.D. and Ley, T.J. 1993. Molecular cloning, chromosomal location, and tissue-specific expression of the murine cathepsin G gene. *Blood* 81: 1614-1623.
3. Shi, G.P., Chapman, H.A., Bhairi, S.M., DeLeeuw, C., Reddy, V.Y. and Weiss, S.J. 1995. Molecular cloning of human cathepsin O, a novel endoproteinase and homologue of rabbit OC-2. *FEBS Lett.* 357: 129-134.
4. Tsukuba, T., Okamoto, K., Yasuda, Y., Morikawa, W., Nakanishi, H. and Yamamoto, K. 2000. New functional aspects of cathepsin D and cathepsin E. *Mol. Cell* 10: 601-611.
5. Ostrowska, H., Krukowska, K., Kalinowska, J., Orłowska, M. and Lengiewicz, I. 2003. Lysosomal high molecular weight multienzyme complex. *Cell. Mol. Biol. Lett.* 8: 19-24.

## CHROMOSOMAL LOCATION

Genetic locus: PPGB (human) mapping to 20q13.12.

## PRODUCT

cathepsin A (h): 293 Lysate represents a lysate of human cathepsin A transfected 293 cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

cathepsin A (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive cathepsin A antibodies. Recommended use: 10-20  $\mu$ l per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.