

# Clusterin (h2): 293T Lysate: sc-113920

## BACKGROUND

Clusterin, also designated complement lysis inhibitor (CLI), apolipoprotein J (apoJ), sulfated glycoprotein 2 (SGP2), SP-40 and testosterone-repressed prostate message 2 (TRPM2), is a secretory, heterodimeric glycoprotein that influences immune regulation, cell adhesion, transformation, lipid transportation, tissue remodeling, membrane recycling and cell-cell interactions. Clusterin is synthesized as a 449 amino acid polypeptide that is posttranslationally cleaved at an internal bond between Arg 227 and Ser 228. Two subunits,  $\alpha$  and  $\beta$ , are associated through disulfide bonds. The  $\beta$  subunit (also called apoJ $\alpha$ ) corresponds to residues 23-227. The  $\alpha$  subunit (also called apoJ $\beta$ ) corresponds to residues 228-449. Overexpression of Clusterin appears to be more common in late stages of mammary tumor progression. Clusterin markedly influences  $\beta$ -Amyloid structure and neuritic toxicity *in vivo* and may influence Alzheimer's disease pathogenesis.

## REFERENCES

- de Silva, H.V., Harmony, J.A., Stuart, W.D., Gil, C.M. and Robbins, J. 1990. Apolipoprotein J: structure and tissue distribution. *Biochemistry* 29: 5380-5389.
- Rosenberg, M.E., Girton, R., Finkel, D., Chmielewski, D., Barrie, A., 3rd, Witte, D.P., Zhu, G., Bissler, J.J., Harmony, J.A. and Aronow, B.J. 2002. Apolipoprotein J/Clusterin prevents a progressive glomerulopathy of aging. *Mol. Cell. Biol.* 22: 1893-1902.
- Chen, X., Halberg, R.B., Ehrhardt, W.M., Torrealba, J. and Dove, W.F. 2003. Clusterin as a biomarker in murine and human intestinal neoplasia. *Proc. Natl. Acad. Sci. USA* 100: 9530-9535.
- Leskov, K.S., Klokov, D.Y., Li, J., Kinsella, T.J. and Boothman, D.A. 2003. Synthesis and functional analyses of nuclear Clusterin, a cell death protein. *J. Biol. Chem.* 278: 11590-11600.
- Gwon, J.S., Kim, I.B., Lee, M.Y., Oh, S.J. and Chun, M.H. 2004. Expression of Clusterin in Muller cells of the rat retina after pressure-induced ischemia. *Glia* 47: 35-45.
- Pucci, S., Bonanno, E., Pichiorri, F., Angeloni, C. and Spagnoli, L.G. 2004. Modulation of different Clusterin isoforms in human colon tumorigenesis. *Oncogene* 23: 2298-2304.
- Criswell, T., Beman, M., Araki, S., Leskov, K., Cataldo, E., Mayo, L.D. and Boothman, D.A. 2005. Delayed activation of Insulin-like growth factor-1 receptor/Src/MAPK/Egr-1 signaling regulates Clusterin expression, a pro-survival factor. *J. Biol. Chem.* 280: 14212-14221.
- Xie, D., Lau, S.H., Sham, J.S., Wu, Q.L., Fang, Y., Liang, L.Z., Che, L.H., Zeng, Y.X. and Guan, X.Y. 2005. Up-regulated expression of cytoplasmic Clusterin in human ovarian carcinoma. *Cancer* 103: 277-283.
- Zhang, H., Kim, J.K., Edwards, C.A., Xu, Z., Taichman, R. and Wang, C.Y. 2005. Clusterin inhibits apoptosis by interacting with activated Bax. *Nat. Cell Biol.* 7: 909-915.

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: CLU (human) mapping to 8p21.1.

## PRODUCT

Clusterin (h2): 293T Lysate represents a lysate of human Clusterin transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## APPLICATIONS

Clusterin (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive Clusterin antibodies. Recommended use: 10-20  $\mu$ l per lane.

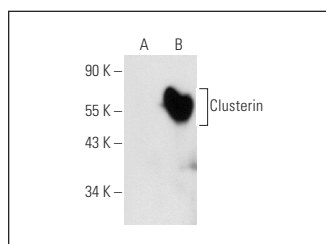
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Clusterin- $\alpha$  (A-11): sc-166831 is recommended as a positive control antibody for Western Blot analysis of enhanced human Clusterin expression in Clusterin transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

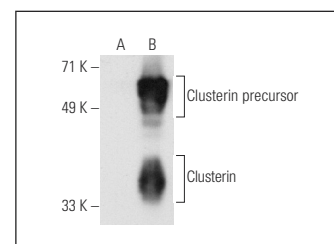
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



Clusterin- $\alpha$  (A-11): sc-166831. Western blot analysis of Clusterin expression in non-transfected: sc-117752 (A) and human Clusterin transfected: sc-113920 (B) 293T whole cell lysates.



Clusterin- $\alpha$  (B-5): sc-5289. Western blot analysis of Clusterin expression in non-transfected: sc-117752 (A) and human Clusterin transfected: sc-113920 (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.