

Clusterin (h): 293T Lysate: sc-112732

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 poly-peptide that is posttranslationally cleaved at an internal bond between Arg 227 and Ser 228. Two subunits, α and β , are associated through disulfide bonds. The β subunit (also called ApoJ α) corresponds to residues 23-227. The α subunit (also called ApoJ β) corresponds to residues 228-449. Overexpression of Clusterin appears to be more common in late stages of mammary tumor progression. Clusterin markedly influences β -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., Klovov, 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. Upregulated 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 (h): 293T Lysate represents a lysate of human Clusterin transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

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

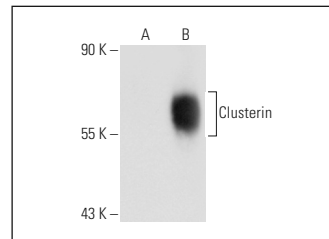
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Clusterin (A-9): sc-166907 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 κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Clusterin (A-9): sc-166907. Western blot analysis of Clusterin expression in non-transfected: sc-117752 (A) and human Clusterin transfected: sc-112732 (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 for detailed protocols and support products.