

Clusterin (CLI-9): sc-56079

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., et al. 1990. Apolipoprotein J: structure and tissue distribution. *Biochemistry* 29: 5380-5389.
- Rosenberg, M.E., et al. 2002. Apolipoprotein J/Clusterin prevents a progressive glomerulopathy of aging. *Mol. Cell. Biol.* 22: 1893-1902.
- Chen, X., et al. 2003. Clusterin as a biomarker in murine and human intestinal neoplasia. *Proc. Natl. Acad. Sci. USA* 100: 9530-9535.

CHROMOSOMAL LOCATION

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

SOURCE

Clusterin (CLI-9) is a mouse monoclonal antibody raised against full length native Clusterin of human origin.

PRODUCT

Each vial contains 50 μ g IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Clusterin (CLI-9) is recommended for detection of Clusterin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for Clusterin siRNA (h): sc-43688, Clusterin shRNA Plasmid (h): sc-43688-SH and Clusterin shRNA (h) Lentiviral Particles: sc-43688-V.

Molecular Weight of Clusterin precursor: 70 kDa.

Molecular Weight of Clusterin- α : 36-39 kDa.

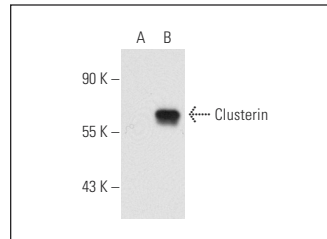
Molecular Weight of Clusterin- β : 34-36 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Clusterin (h): 293T Lysate: sc-112732.

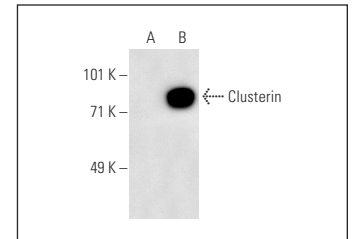
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Clusterin (CLI-9): sc-56079. Western blot analysis of Clusterin expression in non-transfected: sc-117752 (A) and human Clusterin transfected: sc-112732 (B) 293T whole cell lysates.



Clusterin (CLI-9): sc-56079. Western blot analysis of Clusterin expression in non-transfected: sc-117752 (A) and human Clusterin transfected: sc-113920 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Kolialexi, A., et al. 2010. Potential biomarkers for Turner in maternal plasma: possibility for noninvasive prenatal diagnosis. *J. Proteome Res.* 9: 5164-5170.
- Tenzer, S., et al. 2011. Nanoparticle size is a critical physicochemical determinant of the human blood plasma corona: a comprehensive quantitative proteomic analysis. *ACS Nano* 5: 7155-7167.
- Greene, M.J., et al. 2011. Evidence for a functional role of the molecular chaperone Clusterin in amyloidotic cardiomyopathy. *Am. J. Pathol.* 178: 61-68.
- Gazouli, M., et al. 2013. Serum protein profile of Crohn's disease treated with infliximab. *J. Crohns Colitis* 7: e461-e470.
- Braoudaki, M., et al. 2013. Protein biomarkers distinguish between high- and low-risk pediatric acute lymphoblastic leukemia in a tissue specific manner. *J. Hematol. Oncol.* 6: 52.
- Docter, D., et al. 2014. Quantitative profiling of the protein coronas that form around nanoparticles. *Nat. Protoc.* 9: 2030-2044.
- Sharma, S., et al. 2014. Quantitative proteomic analysis of meningiomas for the identification of surrogate protein markers. *Sci. Rep.* 4: 7140.
- Vaiopoulou, A., et al. 2015. Serum protein profiling of adults and children with Crohn disease. *J. Pediatr. Gastroenterol. Nutr.* 60: 42-47.

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.