SANTA CRUZ BIOTECHNOLOGY, INC.

# Clusterin (CLI-9): sc-56079

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## 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, $\alpha$ 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


1. de Silva, H.V., et al. 1990. Apolipoprotein J: structure and tissue distribution. Biochemistry 29: 5380-5389.
2. Rosenberg, M.E., et al. 2002. Apolipoprotein J/Clusterin prevents a progressive glomerulopathy of aging. Mol. Cell. Biol. 22: 1893-1902.
3. 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 µg $IgG_1$ 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 µg per 100-500 µg 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-$\alpha$: 36-39 kDa.

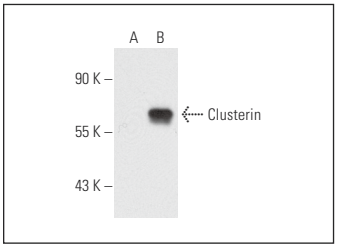
Molecular Weight of Clusterin-$\beta$: 34-36 kDa.

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

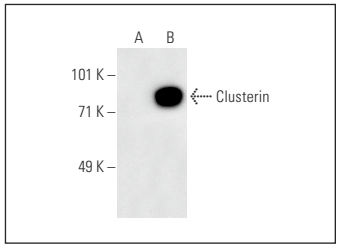
## STORAGE

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


1. Kolialexi, A., et al. 2010. Potential biomarkers for Turner in maternal plasma: possibility for noninvasive prenatal diagnosis. J. Proteome Res. 9: 5164-5170.
2. 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.
3. 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.
4. Gazouli, M., et al. 2013. Serum protein profile of Crohn's disease treated with infliximab. J. Crohns Colitis 7: e461-e470.
5. 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.
6. Docter, D., et al. 2014. Quantitative profiling of the protein coronas that form around nanoparticles. Nat. Protoc. 9: 2030-2044.
7. Sharma, S., et al. 2014. Quantitative proteomic analysis of meningiomas for the identification of surrogate protein markers. Sci. Rep. 4: 7140.
8. Vaiopoulou, A., et al. 2015. Serum protein profiling of adults and children with Crohn disease. J. Pediatr. Gastroenterol. Nutr. 60: 42-47.
9. Shayea, A.M.F., et al. 2023. Neuroprotective effects of a hydrogen sulfide donor in streptozotocin-induced diabetic rats. Int. J. Mol. Sci. 24: 16650.


## 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.