

Clusterin- β (N-18)-R: sc-13747-R

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 post-translationally 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

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.
4. Leskov, K.S., et al. 2003. Synthesis and functional analyses of nuclear Clusterin, a cell death protein. *J. Biol. Chem.* 278: 11590-11600.
5. Gwon, J.S., et al. 2004. Expression of Clusterin in muller cells of the rat retina after pressure-induced ischemia. *Glia* 47: 35-45.
6. Pucci, S., et al. 2004. Modulation of different Clusterin isoforms in human colon tumorigenesis. *Oncogene* 23: 2298-2304.

CHROMOSOMAL LOCATION

Genetic locus: CLU (human) mapping to 8p21.1; Clu (mouse) mapping to 14 D1.

SOURCE

Clusterin- β (N-18)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of Clusterin of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-13747 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

RESEARCH USE

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

APPLICATIONS

Clusterin- β (N-18)-R is recommended for detection of precursor and mature form of Clusterin- β of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 siRNA (m): sc-43689, Clusterin shRNA Plasmid (h): sc-43688-SH, Clusterin shRNA Plasmid (m): sc-43689-SH, Clusterin shRNA (h) Lentiviral Particles: sc-43688-V and Clusterin shRNA (m) Lentiviral Particles: sc-43689-V.

Molecular Weight of Clusterin- β precursor: 70 kDa.

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

Positive Controls: SK-BR-3 cell lysate: sc-2218.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Chapman, R.S., et al. 1999. Suppression of epithelial apoptosis and delayed mammary gland involution in mice with a conditional knockout of Stat3. *Genes Dev.* 13: 2604-2616.
2. Trougakos, I.P., et al. 2004. Differential effects of Clusterin/apolipoprotein J on cellular growth and survival. *Free Radic. Biol. Med.* 38: 436-449.
3. Thomàs-Moyà, E., et al. 2006. The age-related paraoxonase 1 response is altered by long-term caloric restriction in male and female rats. *J. Lipid Res.* 47: 2042-2048.
4. Thomàs-Moyà, E., et al. 2006. Effects of caloric restriction and gender on rat serum paraoxonase 1 activity. *J. Nutr. Biochem.* 17: 197-203.
5. Thomàs-Moyà, E., et al. 2007. Time-dependent modulation of rat serum paraoxonase 1 activity by fasting. *Pflugers Arch.* 453: 831-837.
6. Thomàs-Moyà, E., et al. 2007. Paraoxonase 1 response to a high-fat diet: gender differences in the factors involved. *Mol. Med.* 13: 203-209.
7. Tanaka, T., et al. 2011. Identification of tuberculosis-associated proteins in whole blood supernatant. *BMC Infect. Dis.* 11: 71.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.