

Clusterin- α (A-11): sc-166831

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, 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.

CHROMOSOMAL LOCATION

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

SOURCE

Clusterin- α (A-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 420-449 at the C-terminus of Clusterin- α of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Clusterin- α (A-11) is available conjugated to agarose (sc-166831 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166831 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166831 PE), fluorescein (sc-166831 FITC), Alexa Fluor[®] 488 (sc-166831 AF488), Alexa Fluor[®] 546 (sc-166831 AF546), Alexa Fluor[®] 594 (sc-166831 AF594) or Alexa Fluor[®] 647 (sc-166831 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-166831 AF680) or Alexa Fluor[®] 790 (sc-166831 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166831 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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RESEARCH USE

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

APPLICATIONS

Clusterin- α (A-11) is recommended for detection of Clusterin- α of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 siRNA (r): sc-270340, Clusterin shRNA Plasmid (h): sc-43688-SH, Clusterin shRNA Plasmid (m): sc-43689-SH, Clusterin shRNA Plasmid (r): sc-270340-SH, Clusterin shRNA (h) Lentiviral Particles: sc-43688-V, Clusterin shRNA (m) Lentiviral Particles: sc-43689-V and Clusterin shRNA (r) Lentiviral Particles: sc-270340-V.

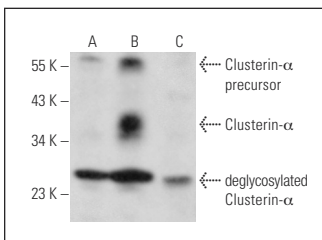
Molecular Weight of Clusterin precursor: 70 kDa.

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

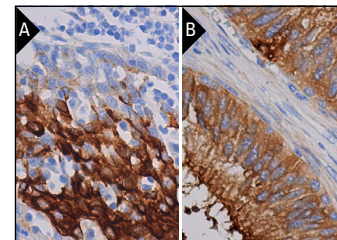
Molecular Weight of Clusterin- β : 34-36 kDa.

Positive Controls: SK-BR-3 cell lysate: sc-2218, A549 cell lysate: sc-2413 or PANC-1 whole cell lysate: sc-364380.

DATA



Clusterin- α (A-11): sc-166831. Western blot analysis of Clusterin- α expression in A549 (A), SK-BR-3 (B) and PANC-1 (C) whole cell lysates.



Clusterin- α (A-11): sc-166831. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic and membrane staining of squamous epithelial cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human epididymis tissue showing cytoplasmic and membrane staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Jhun, H., et al. 2018. Germ cell-specific apoptosis by extracellular Clusterin in cryptorchid dog testes. *Anim. Reprod. Sci.* 193: 158-164.
2. Ren, L., et al. 2019. Clusterin ameliorates endothelial dysfunction in diabetes by suppressing mitochondrial fragmentation. *Free Radic. Biol. Med.* 145: 357-373.
3. Sebak, A.A., et al. 2020. Distinct proteins in protein corona of nanoparticles represent a promising venue for endogenous targeting—part I: *in vitro* release and intracellular uptake perspective. *Int. J. Nanomedicine* 15: 8845-8862.

STORAGE

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