Mouse Clusterin α Chain Antibody

Monoclonal Rat IgG_{2A} Clone # 327020

Catalog Number: MAB2747

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Clusterin α Chain in direct ELISAs and Western blots. In Western blots, approximately 25% cross-reactivity with recombinant human Clusterin is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 327020
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Clusterin Glu22-Glu448 Accession # Q06890
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

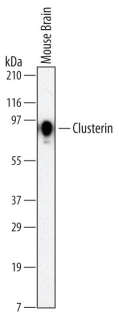
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Mouse Clusterin (Catalog # 2747-HS), see our available Western blot detection antibodies

DATA

Western Blot



Detection of Mouse Clusterin by Western Blot.
Western blot shows lysates of mouse brain tissue. PVDF membrane was probed with 2 µg/mL of Rat Anti-Mouse Clusterin α Chain Monoclonal Antibody (Catalog # MAB2747) followed by HRP-conjugated Anti-Rat IgG Secondary Antibody (Catalog # HAF005). A specific band was detected for Clusterin at approximately 80 kDa (as indicated). This experiment was conducted under non-reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Clusterin, also known as Apolipoprotein J, Sulfated Glycoprotein 2 (SGP-2), TRPM-2, and SP-40,40, is a secreted multifunctional protein that was named for its ability to induce cellular clustering. It binds a wide range of molecules and may function as a chaperone of misfolded extracellular proteins. It also participates in the control of cell proliferation, apoptosis, and carcinogenesis (1, 2). Clusterin is predominantly expressed in adult testis, ovary, adrenal gland, liver, heart, and brain and in many epithelial tissues during embryonic development (3). Mouse Clusterin is synthesized as a precursor that contains two coiled coil domains, two nuclear localization signals (NLS), and one heparin binding domain (3-6). Intracellular cleavages of the precursor remove the signal peptide and generate comparably sized α and β chains which are secreted as an 80 kDa N-glycosylated disulfide-linked heterodimer (7, 8). Mature mouse Clusterin shares 77% and 93% amino acid sequence identity with human and rat Clusterin, respectively. High µg/mL concentrations of Clusterin circulate predominantly as a component of high density lipoprotein particles, and these are internalized and degraded through interactions with LRP-2/Megalin (9, 10). In human, an alternately spliced 50 kDa isoform of Clusterin (nCLU) lacks the signal peptide and remains intracellular (5, 11). This molecule is neither glycosylated nor cleaved into α and β chains (11). In the cytoplasm, nCLU destabilizes the actin cytoskeleton and inhibits NFκB activation (12, 13). Cellular exposure to ionizing radiation promotes the translocation of nCLU to the nucleus where it interacts with Ku70 and promotes apoptosis (5, 11). This function contrasts with the cytoprotective effect of secreted Clusterin (14). During colon cancer tumor progression there is a downregulation of the intracellular form and an upregulation of the glycosylated secreted form (11).

References:

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