

#### DESCRIPTION

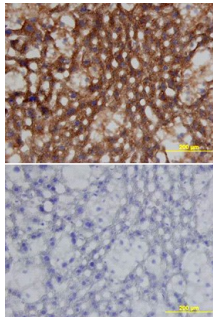
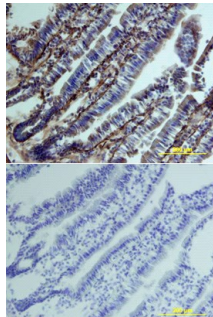
<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse Clusterin in ELISAs and Western blots. In sandwich ELISAs, approximately 5% cross-reactivity with recombinant human Clusterin is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse Clusterin Glu22-Glu448 Accession # Q06890
<b>Formulation</b>	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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.1 µg/mL	Recombinant Mouse Clusterin (Catalog # 2747-HS)
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below
<b>Immunoprecipitation</b>	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Mouse Clusterin (Catalog # 2747-HS), see our available <a href="#">Western blot detection antibodies</a>
<b>Mouse Clusterin Sandwich Immunoassay</b>		<b>Reagent</b>
<b>ELISA Capture</b>	0.2-0.8 µg/mL	Mouse Clusterin Antibody (Catalog # AF2747)
<b>ELISA Detection</b>	0.1-0.4 µg/mL	Mouse Clusterin Biotinylated Antibody (Catalog # BAF2747)
<b>Standard</b>		Recombinant Mouse Clusterin (Catalog # 2747-HS)

#### DATA

<p><b>Immunohistochemistry</b></p>  <p><b>Clusterin in Mouse Liver.</b> Clusterin was detected in perfusion fixed frozen sections of mouse liver using Goat Anti-Mouse Clusterin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2747) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell &amp; Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for <a href="#">Chromogenic IHC Staining of Frozen Tissue Sections</a>.</p>	<p><b>Immunohistochemistry</b></p>  <p><b>Clusterin in Mouse Intestine.</b> Clusterin was detected in perfusion fixed frozen sections of mouse intestine using Goat Anti-Mouse Clusterin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2747) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell &amp; Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for <a href="#">Chromogenic IHC Staining of Frozen Tissue Sections</a>.</p>
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#### PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

#### 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  $\alpha$  and  $\beta$  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  $\mu\text{g}/\text{mL}$  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  $\alpha$  and  $\beta$  chains (11). In the cytoplasm, nCLU destabilizes the actin cytoskeleton and inhibits NF $\kappa$ B 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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