Human Clusterin Biotinylated Antibody

Monoclonal Mouse IgG_{2B} Clone # 350207

Catalog Number: BAM29373

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Clusterin in ELISAs.
Source	Monoclonal Mouse IgG_{2B} Clone # 350207
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Clusterin Asp75-Glu501 Accession # NP_001822
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

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.*

Human Clusterin Sandwich Immunoassay		**Reagent**
ELISA Capture	2-8 µg/mL	Human Clusterin Antibody (Catalog # MAB29372)
ELISA Detection	0.5-2.0 µg/mL	Human Clusterin Biotinylated Antibody (Catalog # BAM29373)
Standard		Recombinant Human Clusterin (Catalog # 2937-HS)

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.
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.

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). Human Clusterin is synthesized as a precursor that contains two coiled coil domains, three nuclear localization signals (NLS), and one heparin binding domain (4-6). 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 human Clusterin shares 77% amino acid sequence identity with mouse and rat Clusterin. 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 down-regulation of the intracellular form and an up-regulation of the glycosylated secreted form (11).

References:

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