Mouse Complement Component C5a
Antibody
Monoclonal Rat IgG2A Clone # 295108
Catalog Number: MAB21501

DESCRIPTION

Species Reactivity Mouse
Specificity Detects mouse Complement Component C5a in Western blots. In Western blots, this antibody does not cross-react with recombinant mouse Complement Component C3d, recombinant human (rh) Complement Component C3a, or rhComplement Component C5a.
Source Monoclonal Rat IgG2A Clone # 295108
Purification Protein A or G purified from hybridoma culture supernatant
Immunogen E. coli-derived recombinant mouse Complement Component C5a Asn679-Arg755 Accession # P06684
Endotoxin Level <0.10 EU per 1 μg of the antibody by the LAL method.
Formulation Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. 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.

Recommended Concentration

Sample

Western Blot
1 µg/mL
Recombinant Mouse Complement Component C5a (Catalog # 2150-C5)

Mouse Complement Component C5a Sandwich Immunoassay

Reagent

ELISA Capture
2-8 µg/mL
Mouse Complement Component C5a Antibody (Catalog # MAB21501)

ELISA Detection
0.1-0.4 µg/mL
Mouse Complement Component C5a Biotinylated Antibody (Catalog # BAF2150)

Standard

Recombinant Mouse Complement Component C5a (Catalog # 2150-C5)

Neutralization

Measured by its ability to neutralize Complement Component C5a-induced N-acetyl-β-D-glucosaminidase release in the dibutyryl cyclic-AMP differentiated U937 human histiocytic lymphoma cell line. Gerard, NP and Gerard, C. (1990) Biochemistry 29: 9274. The Neutralization Dose (ND50) is typically 0.1-0.5 µg/mL in the presence of 50 ng/mL Recombinant Mouse Complement Component C5a and cytochalasin-B.

DATA

Neutralization N-Acetyl-β-D-Glucosaminidase Release Induced by Complement Component C5a and Neutralization by Mouse Complement Component C5a Antibody. Recombinant Mouse Complement Component C5a (Catalog # 2150-C5) induces N-acetyl-β-D-glucosaminidase release in the dibutyryl cyclic-AMP differentiated U937 human histiocytic lymphoma cell line in a dose-dependent manner (orange line). N-Acetyl-β-D-Glucosaminidase Release elicited by Recombinant Mouse Complement Component C5a (50 ng/mL) is neutralized (green line) by increasing concentrations of Rat Anti-Mouse Complement Component C5a Monoclonal Antibody (Catalog # MAB21501). The ND50 is typically 0.1-0.5 µg/mL in the presence of cytochalasin-B.

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.

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Mouse Complement 5a (C5a) is an enzymatically generated glycoprotein that belongs to a family of structurally and functionally related proteins known as Anaphylatoxins. C5a is a 77 amino acid (aa) peptide that is created by the activity of C5a convertase on the C5 α-chain (1, 2). Mouse C5a has four α-helices, plus three intrachain disulfide bonds that create a triple loop structure (3). In serum, proteolytic processing removes the C-terminal arginine, creating a low activity C5a desArg77 molecule (1). Mouse C5a shares 60% and 82% aa sequence identity to human and rat C5a, respectively. C5a binds to a signaling G-protein coupled receptor (GPCR) (C5aR/CD88), inducing neutrophil chemotaxis and endothelial cell activation (1, 4). It also triggers an oxidative burst in macrophages and neutrophils, and induces release of histamine in basophils and mast cells (1, 4). Alternatively, it may also bind to a nonsignaling GPCR termed C5L2 whose function is yet to be determined (5).

References: