Mouse Complement Component C5a Antibody

Monoclonal Rat IgG_{2B} Clone # 295103

Catalog Number: MAB2150

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Complement Component C5a in direct ELISAs and Western blots. In direct ELISAs, this antibody does not cross-react with recombinant human (rh) C3a, rmC3d, or rhC5a.
Source	Monoclonal Rat IgG_{2B} Clone # 295103
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant mouse C5a Asn679-Arg755 Accession # P06684
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 either lyophilized or 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	1 µg/mL	Recombinant Mouse Complement Component C5a (Catalog # 2150-C5) under non-reducing conditions only

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.

BACKGROUND

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:

1. Gerard, C. and N.P. Gerard (1994) Annu. Rev. Immunol. **12**:775.
2. DiScipio, R.G. *et al.* (1983) J. Biol. Chem. **258**:10629.
3. Huber-Lang, M.S. *et al.* (2003) J. Immunol. **170**:6115.
4. Gerard, N.P. and C. Gerard (2002) Curr. Opin. Immunol. **14**:705.
5. Okinaga, S. *et al.* (2003) Biochemistry **42**:9406.

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