

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Complement Component C5a in ELISAs and Western blots. In sandwich immunoassays, less than 0.05% cross-reactivity with rhC5a, rhC3a, rnC3d and rhAlpha-2 macroglobulin is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant mouse C5a (R&D Systems, Catalog # 2150-C5) Asn679-Arg755 Accession # P06684
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.

	Recommended Concentration	Sample
Western Blot	0.1 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)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 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 non-signaling 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.