

DESCRIPTION

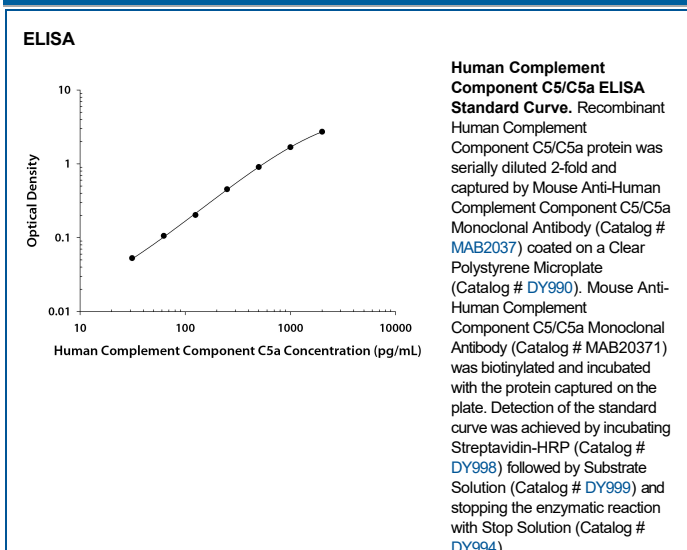
Species Reactivity	Human
Specificity	Detects human Complement Component C5/C5a in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 295009
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Complement Component C5a Thr678-Arg751 Accession # P01031
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.

ELISA	This antibody functions as an ELISA detection antibody when paired with Mouse Anti-Human Complement Component C5/C5a Monoclonal Antibody (Catalog # MAB2037). <i>This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Human Complement Component C5a DuoSet ELISA Kit (Catalog # DY2037) for convenient development of a sandwich ELISA.</i>
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DATA



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. <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

Human complement component C5a (C5a) is an enzymatically generated glycoprotein that belongs to a family of structurally and functionally related proteins known as anaphylatoxins. C5a is a 74 amino acid (aa) peptide that is created by the activity of C5a convertase on the C5 α -chain (1, 2). Human 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 desArg74 molecule (1). Human C5a is 60% and 54% aa identical to mouse and rat C5a, respectively. C5a binds to a signaling G-protein coupled receptor (C5aR/CD88) and a non-signaling GPCR termed C5L2 (4). Activation of Cd88 results in neutrophil chemotaxis and endothelial cell activation (1, 5). It also triggers an oxidative burst in macrophages and neutrophils, and induces release of histamine in basophils and mast cells.

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. Okinaga, S. *et al.* (2003) *Biochemistry* **42**:9406.
5. Gerard, N.P. and C. Gerard (2002) *Curr. Opin. Immunol.* **14**:705.