

**Anti-Complement component C3a/C3a (desArg) (human)
Mouse monoclonal antibody**

Subclass: IgG1/k

PRODUCT NO.

GAU 013-16

Clone: K13/16-5.7

PRESENTATION

Preparation: Protein-A/G purified

Content: Available in 200 µL and 1 mL volumes, 1 mg/mL

Solvent: 0.01 M phosphate buffer, pH 7.4, containing 0.5 M NaCl and 15 mM sodium azide

Storage: In the dark at 4-8°C

ANTIGEN

Complement C3a is an anaphylatoxin of 77 amino acid residues released by the action of the C3 convertases on the N-terminal of the alpha chain of C3. It is rapidly inactivated by serum carboxypeptidase N which removes the C-terminal arginine residue generating C3a (desArg).

IMMUNOGEN

Human C3a adsorbed onto aluminum hydroxide gel (1)

SPECIFICITY

GAU 013-16 is specific for human C3, C3a and C3a (desArg) (1) and does not cross-react with C4a or C5a (2, 3).

EPI TOPE SPECIFICITY

GAU 013-16 recognizes a different epitope on the 9 kDa C3a than GAU 017-01 (2, 3). No reaction is seen with a synthetic octapeptide representing the C3a C-terminal (2).

REACTIVITY

GAU 013-16 can be used as a capture antibody in sandwich ELISA with GAU 017-01 as a biotinylated detection antibody (4). GAU 013-16 can also be used to immunopurify C3a (5, 6). GAU 013-16 effectively inhibits the biological activity of C3a in a guinea-pig platelet activation assay (6).

CULTURE MEDIUM

RPMI 1640 with 10% fetal calf serum

FUSION PARTNER

IMMUNIZATION

Female BALB/c mice immunized by intraperitoneal injection

APPLICATION

Method	Usability	Dilution guideline	References
ELISA	Yes	1/10,000	1, 2, 6
Immunoblotting	Yes		2, 6
Immunohistochemistry	Not determined		

The dilution guideline for ELISA is based on use as detection antibody for antigen coated at 0.1-1 µg/ml. Users should determine the optimal dilutions for their own purposes.

REFERENCES

1. Oppermann M, Haubitz M, Quintin E, Götze O (1988) Complement activation in patients with renal failure as detected through the quantitation of fragments of the complement proteins C3, C5, and Factor B. *Klin Wochenschr* 66:857-864.
2. Nezlín R, Freywald A, Oppermann M (1993) Proteins separated from human IgG molecules. *Mol. Immunol.* 30:935-940.
3. Oppermann M, Liebmann F, Götze O. (1987) Purification and quantification of human C3a anaphylatoxin using monoclonal antibodies. *Complement* 4:205-206
4. Oppermann M, Kurts C, Zierz R, Quintin E, Weber MH, Gotze O (1991) Elevated plasma levels of the immunosuppressive complement fragment Ba in renal failure. *Kidney Int.* 40:939-947.
5. Püschel GP, Hespeling U, Oppermann M, Dieter P (1993) Increase in prostanoid formation in rat liver macrophages (Kupffer cells) by human anaphylatoxin C3a. *Hepatology.* 18(6):1516-21.
6. Püschel GP, Oppermann M, Muschol W, Gotze O, Jungermann K. (1989) Increase of glucose and lactate output and decrease of flow by human anaphylatoxin C3a but not C5a in perfused rat liver. *FEBS Lett.* 16;243(1):83-7.

CONDITIONS

All products are supplied on the understanding that they are for in vitro use only. The information and product are offered without guarantee as the ultimate conditions of use are beyond our control. The animals from which this product was derived have not been exposed to or inoculated with any livestock or poultry disease agents exotic to the United States or Western Europe, and did not originate from facilities where work with exotic disease agents affecting livestock or avian species is carried out.