

**Anti-Complement component C3, β -chain genetic variant (human)
 Mouse monoclonal antibody**

Subclass: IgG_{2a}/k

PRODUCT NO.

HAV 004-01

Clone: 8G4

PRESENTATION

Preparation: Protein-A/G purified

Content: Available in 200 μ L and 1 mL size. 1 mg/mL +/- 15%. See Certificate of Analysis for details.

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

Storage: 4-8°C without exposure to light. No precautions necessary during handling.

ANTIGEN

C3 is a key component of the complement system since classical and alternative activation pathways merge at the C3 activation step when C3 is split into C3a and C3b. The molecular mass of C3 is 185 kDa and it consists of α - and β chains (110 kDa and 75 kDa respectively) held together by disulfide bonds (1,2).

IMMUNOGEN

C3 isolated from human plasma adsorbed onto aluminum hydroxide gel

SPECIFICITY

HAV 004-01 is specific for an allotypic marker on human C3 (Leu instead of Pro in codon 314 of exon 9), which occurs regularly in the β -chain of C3F and occasionally in the β -chain of C3S (3,4). F and S mean fast and slow, respectively, on agarose gel electrophoresis. HAV 004-01 reacts with the 75-kDa β -chain band on SDS-PAGE immunoblotting of reduced C3, and reacts with 20-kDa and 17-kDa β -chain fragments produced by cyanogen bromide cleavage (5).

EPI TOPE SPECIFICITY

Epitope specificity differs from that of HAV 003-05

REACTIVITY

HAV 004-01 reacts strongly with C3. A strong reaction is seen in ELISA with C3 coated directly onto the microtiter well, and also when used as a biotinylated detection antibody in sandwich ELISA in wells coated with a polyclonal antibody against C3.

In Western blotting after SDS-PAGE, HAV 004-01 detects the above-mentioned allotypic marker on the β -chain of C3, closely related but not completely specific to the fast-moving form of C3, C3F.

HAV 004-01 can be cleaved by papain to produce Fab fragments.

CULTURE MEDIUM

RPMI 1640 with 10% fetal calf serum

FUSION PARTNER

X63-Ag8.653

IMMUNIZATION

Female CF1 x BALB/c mice immunized by intraperitoneal injection

APPLICATION

Method	Usability	References
ELISA	Yes	
Immunoblotting	Yes	3,5
Immunohistochemistry	Not determined	

REFERENCES

1. Law SKA, Reid KBM (1988) Complement. In: In Focus (Ed. Male D) IRL Press: Oxford.
2. Morley BJ and Walport MJ (2000) The Complement Facts Book. Academic Press, London, UK.
3. Koch C, Behrendt N (1986) A novel polymorphism of human complement component C3 detected by means of a monoclonal antibody. Immunogenetics 23:322-325.
4. Botto M, Fong KY, So AK, Koch C, Walport MJ (1990) Molecular basis of polymorphisms of human complement component C3. J Exp Med 172:1011-1017.
5. Behrendt N, Hansen OC, Ploug M, Barkholt V, Koch C (1987) Localization and functional significance of a polymorphic determinant in the third component of human complement. Mol Immunol 24:1097-1103.

CONDITIONS

Unless otherwise marked, all products are for research use only. Not for use in diagnostic procedures. Not for use in human therapeutic applications. For in vitro use or further manufacture only. The information and product are offered without guarantee as the ultimate conditions of use are beyond our control. The foregoing is in lieu of all warranties, expressed or implied, including implied warranties of merchantability and fitness for a particular purpose. In no event shall BioPorto Diagnostics A/S be responsible for loss of profits or indirect consequential losses resulting from use of its products.