

Product Information

Complement C5 from human serum

Catalog Number **C3160**
Storage Temperature $-70\text{ }^{\circ}\text{C}$

CAS RN 80295-53-0

Product Description

Human complement C5 is a β_1 -globulin¹ with a molecular mass of 196 kDa.² It is composed of two non-identical polypeptide chains,² an α -chain of 116 kDa and a β -chain of 80 kDa.³ The cleavage of C5 by C5 convertase into C5a and C5b fragments is the first step in the formation of the membrane attack complex.⁴ Complement factor C5a directs degranulation of mast cells, chemotaxis of polymorphonuclear leukocytes, and contraction of smooth muscle.⁵ The assembly of the C5b-9 complex is initiated by the ability of C5b to bind C6 and C7.⁶

This product is supplied as a solution in phosphate buffered saline (PBS), pH 7.2.

Activity: $>100,000$ C5H50 units/mg protein

Unit definition: One C5H50 unit is defined as the amount of complement C5 required to yield 50% lysis of 3×10^7 antibody-sensitized sheep erythrocytes using C5-deficient serum.

For a procedure to prepare antibody-sensitized sheep erythrocytes, please visit the following link at our Enzyme Explorer:

<https://www.sigmaaldrich.com/life-science/metabolomics/enzyme-explorer/cell-signaling-enzymes/complement-proteins/preparation-of-antibody.html>

Purity: $\geq 90\%$ (SDS-PAGE)

Protein concentration based on $E_{260}^{1\%} = 10.3$

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

The product ships on dry ice and storage at $-70\text{ }^{\circ}\text{C}$ is recommended. Repeated freezing and thawing is **not** recommended.

References

1. Nilsson, U.R., and Müller-Eberhard, H., *J. Exp. Med.*, **122(2)**, 277-296 (1965).
2. Tack, B.F. *et al.*, *Biochemistry*, **18(8)**, 1490-1497 (1979).
3. DiScipio, R.G. *et al.*, *J. Biol. Chem.*, **258(17)**, 10629-10636 (1983).
4. Sissons, J.G.P. *et al.*, *J. Clin. Invest.*, **59(4)**, 704-715 (1977).
5. Cochrane, C.G., and Müller-Eberhard, H.J., *J. Exp. Med.*, **127(2)**, 371-386 (1968).
6. Lachmann, P.J., and Thompson, R.A., *J. Exp. Med.*, **131(4)**, 643-657 (1970).

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