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ProductInformation

COMPLEMENT C1, HUMAN

Product No. **C 2660**
Store at –70 °C

Product Description

In the presence of Ca^{++}, human complement C1 (approx. mol. wt. 750,000 Da) is a complex of three different proteins: one molecule of C1q, two molecules of C1r and two molecules of C1s. The C1q component of C1 binds to an IgG on a cell surface and apparently undergoes a conformational change to allow C1r to autoactivate by selective proteolytic cleavage. A molecule of C1r is a homodimer with a monomer molecular weight of 95,000 Da by SDS-PAGE. The cleavage of each subunit forms 2 disulfide linked fragments of 60,000 and 35,000 Da by SDS-PAGE. Activated C1r will cleave C1s (approx. mol. wt. 87,000 Da) to produce two disulfide-linked fragments of 59,000 and 28,000 Da. The natural substrates of activated C1s are C4 and C2 of the classical complement pathway.[1]

Storage

Store at –70 °C or below. Repeated freeze and thaw cycles are not recommended.

Product Profile

Protein: 0.1 mg protein/ml in 20mM Tris-HCl pH 7.4, 154 mM NaCl, 1 mM $CaCl_2$ and 0.03 mM p-nitrophenyl-p'-guanidinobenzoate. Protein concentration based on Lowry method.
Activity: C1 functional activity was determined by activation of hemolytic C4 activity using purified C4 (Product No. C 8145) and C4-deficient guinea pig serum (Product No. C 1038). The C1 activity in the C4-deficient serum was inactivated by EDTA.[2-5]
Purity: Approximately 90% by SDS-polyacrylamide gel electrophoresis.
A small percentage of aggregated C1 (as determined by Western blot) is observed when running a 10% SDS-PAGE gel.
Approx. molecular weight: 750,000 Da

References

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4. Gigli, I. *et al*., Biochem. J., **157**, 541-548 (1976)
5. Cooper, N.R. and Müller-Eberhard, H.J., Immunochem., **5**, 155-169 (1968)

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