ProductInformation

COMPLEMENT C1s, HUMAN
Product Number **C2287**
Storage Temperature -70°C

Product Description
Solution at 0.1 mg protein/ml in 50 mM sodium phosphate, pH 7.4, 0.27 M NaCl, 2 mM EDTA and 0.03 mM p-nitrophenyl-p'-guanidinobenzoate. Protein concentration based on Lowry method.

In the presence of Ca^{++}, human complement C1 (approx. M.W. 750,000 DA) is a complex of three different proteins; 1 molecule C1q, 2 molecules C1r and 2 molecules C1s. The C1q component of C1 binds to 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. M.W. 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/Stability
Store at -70C or below. Repeated freeze and thaw cycles are not recommended.

Activity
C1s functional activity was determined by reconstitution of C1 with C1q (product no C0660), C1r (product no. C2162) and C1s (product no. C2287) followed by activation of hemolytic C4 activity using purified C4 (product no. C3035) and C4-deficient guinea pig serum (product no. C1038). EDTA inactivated the C1 activity in the C4-deficient serum[2-5] .

Purity
Approximately 90% by SDS-polyacrylamide gel electrophoresis. A small percentage of aggregated C1s (as determined by Western Blots) is observed when running a 10% SDS-PAGE gel.

Approx. molecular Weight: 87,000 Da

References
1. Cooper, N.R., Adv. Immunol., **37**, 151-216 (1985)
2. Medicus, R.G. and Chapuis, R.M., J. Immunol., **125**, 390-395 (1980)
3. Schifferli, J.A. and Steiger, G., J. Immunol. Methods, **76**, 283-288 (1985)
4. Gigli, I. et al., Biochem. J., **157**, 541-548 (1976)
5. Cooper, N.R. and Muller-Eberhard, H.J., Immunochem., **5**, 155-169 (1968).

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