

**COMPLEMENT C1q DEFICIENT SERUM,
Human**

Product No. **C8567**
Lot 83H9480

Precautions and Disclaimer

For laboratory use only. Not for drug, household or other uses. POTENTIAL BIOHAZARD. Handle as if capable of transmitting infectious agents. Refer to Material Safety Data Sheet.

Storage/Stability

Store below 0°C. After reconstitution, store at -70°C. Repeated freezing and thawing is **not** recommended.

Procedure

The following procedure is used for the assay of C1q activity.

1. Reconstitute the C1q deficient serum with ice cold deionized water in the amount given on the label.
2. Add 20 µl of a solution containing 0.3 M CaCl₂ and 1 M MgCl₂ to each ml of C1q deficient serum.
3. Prepare nine precooled assay tubes labeled "A" through "I" and two control tubes labeled "100% lysis" and "Spontaneous lysis".
4. Dilute purified complement C1q (Product No. C0660) or normal serum to a concentration of 5 µg/ml complement C1q with gelatin veronal buffer (GVB²⁺, Product No. G6514).

Product Information

5. Prepare a suspension of 1.5 x 10⁸ cells/ml of antibody sensitized sheep erythrocytes (Product No. E9383, EA7S) in GVB²⁺.
6. Prepare reaction tubes according to Table 1.
7. Incubate all tubes in a 37°C water bath with shaking for 3-15 minutes.
8. Add 1.0 ml of ice cold GVB²⁺ buffer immediately at the end of the incubation time.
9. Centrifuge all tubes at 2,000 rpm at 0-4 °C for 10 minutes.
10. Read the absorbance of each supernatant at 412 nm.
11. Subtract the OD₄₁₂ of "Spontaneous lysis" tube from the OD₄₁₂ of each assay tube (A,B,...,I). These values represent OD'₄₁₂. Consider the OD'₄₁₂ of tube B as 100% of complement activity.
12. The percent of normal complement activity for each tube is calculated as the OD'₄₁₂ of each tube divided by the OD'₄₁₂ of tube B.

TABLE I

Assay Tubes	GVB ²⁺ (μl)	dH ₂ O (μl)	C1q deficient serum (μl)	Normal serum (μl)	Purified C1q (μl)	EA7S (1.5 x 10 ⁸ cells/ml) (μl)
A	300	---	10	---	---	200
B	300	---	---	10	---	200
C	299	---	10	---	1	200
D	295	---	10	---	5	200
E	290	---	10	---	10	200
F	288	---	10	---	12	200
G	286	---	10	---	14	200
H	284	---	10	---	16	200
I	282	---	10	---	18	200
Control tubes: 100% lysis	---	310	---	---	---	200
Spontaneous lysis	310	---	---	---	---	200

Product Profile

Protein: Determined by Biuret method.

Form: Lyophilized from amount of serum indicated on the label.

Source: Prepared from freshly clotted whole blood.
C1q is depleted by the method of Kolb.¹Background activity (OD'₄₁₅): 0.032

Note: Background activity should be determined at the time of assay each time complement C1q deficient serum is used.

Recommended volume of C1q deficient serum: 10 μl.

References

1. Kolb, *et al.*, *J. Immunol.*, **122**, 2103 (1979)
2. Kabat, E.A. and Mayer, M.M., *Experimental Immunoochemistry*, Springfield, IL, Charles C. Thomas, 2nd edition, 149 (1961)