Name:	**Cyno C1q-Dpl (Cynomolgus monkey)**
Catalog Number:	**CY300**
Sizes Available:	1.0 mL/vial
Concentration:	>50 mg protein/mL (see Certificate of Analysis for actual conc.)
Form:	Frozen liquid
Activity:	Partial restoration of classical pathway activity after reconstitution with cyno C1q (< 50% CH50 activity).
Purity:	No C1q detectable by immunodiffusion
Buffer:	10 mM sodium phosphate, 145 mM NaCl, pH 7.4
Preservative:	None, 0.22 µm filtered
Storage:	-70ºC or below. Minimize freeze/thaw cycles.
Source:	Normal cyno serum
Precautions:	Use normal precautions for handling animal blood products.
Restrictions:	Not available for sale or usage outside the USA due to international endangered species laws.
Origin:	Manufactured in the USA.

General Description

Normal cynomolgus monkey (*Macaca fascicularis*) serum (Cat# NCYS) was depleted of C1q by ion exchange and immunoaffinity chromatography. The product is tested for the absence of C1q by functional assays for classical pathway activity and for C1q protein by double immunodiffusion. Cyno C1q-Dpl is certified to possess a functional alternative pathway for complement activation (Morgan, B.P. (2000); Dodds, A.W. and Sim, R.B. (1997)). Addition of purified cyno C1q protein (70 µg/mL) to cyno C1q-Dpl resulted in partial restoration of the classical pathway (< 50% CH50 activity) when compared to NCYS as complement standard (See Assays Section for details). The absence of C1q does not prevent complement activation by the lectin and alternative pathways on appropriate surfaces.

Physical Characteristics

Cyno C1q-Dpl is supplied as a clear, straw-colored liquid containing all proteins of normal human serum except complement component C1q. Although the Cyno C1q-Dpl is filtered through 0.22 µm sterile filters and is aliquoted into sterile containers, it is not packed under strictly sterile conditions and is therefore not certified as sterile.

Function

The depleted serum is tested for remaining classical pathway activity by hemolytic assays using antibody-sensitized sheep erythrocytes (CompTech #B200) and for alternative pathway function using rabbit erythrocytes (CompTech #B300). The depleted serum is reconstituted with 70 µg/mL cyno C1q (CompTech #CY099) and retested to verify that a functional classical pathway is restored. The Certificate of Analysis provided with each lot gives a description of the assays for the depleted and reconstituted sera compared to normal cyno serum.

Assays

The unit of classical pathway activity is the CH50. Addition of purified cyno C1q protein (70 µg/mL) to cyno C1q-Dpl resulted in partial restoration of the classical pathway activity (<

50% CH50 activity) when compared to NCYS as complement standard. Supplementation of cyno C1q-Dpl with human C2 and C4 restored classical pathway activity to 100% when compared to NCYS as complement standard.

Alternative pathway titers are performed to document that this pathway of complement activation is fully functional in C1q-Dpl. Lectin pathway activity is not tested.

Applications

C1q-Dpl is used to assay C1q hemolytic activity in samples and to supply an alternative pathway activating system that is incapable of activating the classical pathway.

Precautions/Toxicity/Hazards

The source is Normal cynomolgus monkey blood, therefore precautions appropriate for handling any animal blood-derived product must be used.

Hazard Code: B

MSDS available upon request.

References

Dodds, A.W. and Sim, R.B. editors (1997) Complement. A Practical Approach (ISBN 019963539) Oxford University Press, Oxford.

Morgan, B.P. ed. (2000) Complement Methods and Protocols. (ISBN 0-89603-654-5) Humana Press, Inc., Totowa, New Jersey.

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