

Complement

Technical Data Sheet

Monoclonal Antibodies: Murine Monoclonal Anti-C3d (neo)

For Research Use Only. Not for use in Diagnostic Procedures.

Background

Under normal conditions, activation of either of the complement pathways leads to the formation of C3 convertase enzymes which cleave C3 into two fragments C3a, an anaphylatoxin, and C3b. The C3b fragment has many biologic functions¹ including promotion of phagocytosis and participation as a structural component in both the C3 and C5 convertase enzymes. These processes are under stringent control *in vivo*. One control mechanism involves a two-site cleavage of C3b by Factor I with the cooperation of Factor H or CR1 as cofactors. When cleaved in this way the biologic functions of C3b are lost. The resulting protein is termed iC3b. This fragment, in turn, has a host of new biologic activities.¹

C3d fragments can interact with a variety of cell types expressing complement receptors (either CR2 or CR3). C3d levels in fluid phase are elevated in a variety of disease states including Systemic Lupus Erythematosus, Rheumatoid Arthritis as well as in a variety of pathologic conditions including sepsis and Myocardial Infarct.

Quidel's monoclonal antibodies to complement antigens were prepared using standard techniques. They are purified from mouse ascites fluid via protein A affinity chromatography.

The specificity of the monoclonal antibody was established via a series of immunological techniques including ELISA, hemagglutination and RIA. Firstly, the antibody was shown by ELISA to bind to C3 antigens using highly pure, immobilized C3. Subsequent studies showed that this antibody agglutinates EC3bi, EC3b and EC3d cells in an indirect hemagglutination assay. Further experiments showed that this antibody bound to radio-labeled purified iC3b, C3b, and C3d but not to similarly labeled C3, or C3c.

Applications

Please contact Quidel Specialty Products Technical Services for application specific information.

EIA	RIA	IHC ²	WB	FACS
N/T	N/T	>1:1000	N/T	N/T

N/T = Not tested.

Specifications

Catalog Number: A250
Concentration: ≥ 1.0 mg/ml
Purity: > 95% by SDS PAGE
Volume/Vial: 100 μ l
Storage: Short term (30 days) 4°C
Long term at or below -20°C
Buffer: Borate Buffered Saline
(pH 8.4 \pm 0.2)

References

- 1 Barilla-LaBarca, M.L. et al. "Role of Membrane Cofactor Protein (CD46) in regulation of C4b and C3b Deposited Cells" J Immunol (2002) 168:6298-6304.
- 2 Baldwin W.M., Samaniego-Picota M, Kasper E.K., Clark A.M., Czader M, Rohde C, Zachary A.A., Sanfilippo F, Hruban R.H., "Complement Deposition in Early Cardiac Transplant Biopsies is Associated With Ischemic Injury and Subsequent Rejection Episodes" Transplantation 68(6):894-900, 1999.

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