



Polyclonal Antibodies: Chicken Anti-Human C4b (IgY)

**For Research Use Only.
Not For Use in Diagnostic Procedures.**

Specifications

Catalog Number: A801

Protein concentration: 1.0 – 1.2 mg/ml

Purity: ≥ 85% by SDS PAGE

Volume/Vial: 100 µl

Storage: ≤ -20°C

Buffer: Phosphate Buffered Saline
(pH 7.0 ± 0.2)

Background¹

The classical pathway of complement can be triggered by antibodies bound to a foreign particle, immune complex, cell or other material. Antibody bound particles of this type interact directly with the C1q molecule. In turn, this activates the C1r(2)C1s(2) sub-units of the C1 complex. The activated C1s cleaves C4 to C4b near the amino terminus of the gamma chain releasing C4a in the process. The short-lived C4b can then bind covalently to membranes or other surfaces via an amide or ester bond. This inefficient process is limited to the immediate vicinity of the C1 complex. Then C4b takes part in the classical convertase enzyme.

Both bound and free C4b are strictly controlled *in vivo*. The ability of C4b to participate in classical pathway activation and opsonization reactions is inhibited by a single site cleavage of the alpha chain by Factor I. This reaction requires C4 binding protein or CR1 as a cofactor. This initial cleavage inactivates C4b, resulting in iC4b. Further degradation of this molecule by Factor I produces the C4c and C4d fragments. Both of these fragments can be produced in fluid phase or on target surface.

Preparation²

Quidel's IgY antibodies to complement antigens were prepared using standard techniques. Hens were immunized with highly purified C4b prepared at Quidel. The generated antibodies were isolated from egg yolks using standard salt precipitation techniques. The prepared polyclonal antibodies are buffer exchanged in Phosphate Buffered Saline without preservatives. The isolated antibodies were tested for purity by SDS-PAGE and specificity and activity by EIA.

Applications³

EIA	RIA	IHC	WB	FACS
> 1:1000	Not Tested	Not Tested	Not Tested	Not Tested

Species Cross Reactivity

The ability of whole animal complement to inhibit binding of the antibody to solid phase purified human complement in an ELISA inhibition assay. Results versus a human control material are provided below. Unlisted animal sera have not been tested.

	Human (+)	100%	n/a
	Chicken (-)	0	n/a
Rat		40	Moderate
Dog		32	Moderate
Porcine		33	Moderate
Bovine		41	Moderate
Sheep		19	Weak
Mouse		34	Moderate
Rhesus Macaque		89	Strong
Goat		32	Moderate
Hamster		31	Moderate
Rabbit		38	Moderate

Related Products

A008:	Quidel™ C4d Fragment EIA Kit
A211:	Monoclonal anti-human C4c
A213:	Monoclonal anti-human C4d
A251:	Monoclonal anti-human C4d (neoantigen)
A253:	Monoclonal anti-human C4d (0.5ml)

Ordering and Further Technical Information

To place an order or for technical assistance in the United States, please call (800) 524-6318, Monday through Friday, between 8:00 am and 5:00 pm, Pacific Time. Orders may also be placed by fax at (408) 616-4311 anytime. For orders placed outside the U.S. and Canada, please contact your local Quidel distributor.

Information about Quidel, our affiliated distributors and our products is available online at www.quidel.com.

References

1. Complement Second Edition; SKA Law and KBM Reid Eds Oxford University Press (1995) pp 11-29.
2. *Chicken Egg Yolk Antibodies, Production and Application, IgY-Technology* Schade, R. ed Springer Lab Manual (2001) pp. 85-88.
3. Data on file at Quidel Corporation.

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