



Monoclonal Antibodies: Murine Anti-Human Factor H (#2)

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

Specifications

Catalog Number:	A254
Concentration:	1.0 – 1.2 mg/ml
Purity:	≥ 95% by SDS PAGE
Volume/Vial:	100 µl
Storage:	
≤ 30 Days	2-8°C
> 30 Days	≤ -20°C
Buffer:	Phosphate Buffered Saline (pH 7.0 ± 0.2)
Isotype:	IgG₁k

Background

Factor H is a fluid phase complement regulatory protein consisting of a single peptide chain of 20 short consensus repeat segments or CCP's with a molecular weight of approximately 155 KD.¹ FH regulates the alternative pathway of the complement system by modifying activity of the "feedback loop". It does this in three ways. First, it is a cofactor for the serine protease Factor I, which cleaves C3b to iC3b. iC3b has no hemolytic or amplification function, but may be bound by complement receptors. Second, Factor H both prevents the formation of and accelerates the disassociation of the alternative pathway C3 convertase, C3bBb from cell surfaces. Finally, FH binds to polyanions on host cell surfaces and tissue matrices, such as basement membranes, blocking deposition of C3b. This later activity is leveraged by many pathogens as a mode of complement evasion.²

Recent studies have linked Factor H to hemolytic uremia syndrome (HUS)³, age-related macular degeneration (AMD)⁴ membrano-proliferative glomerulonephritis. Factor H may also be elevated in certain cancers, including bladder cancer, potentially as a protective measure used by tumor cells to evade complement attack.

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Production and Characterization

All of Quidel's monoclonal antibodies to complement antigens were prepared using intact complement proteins and are purified from mouse ascites fluid via protein A affinity chromatography. The prepared monoclonal antibodies are buffer exchanged in Borate Buffered Saline containing 0.02% NaN₃.

The specificity of the Factor H (#2) (clone 90X) monoclonal antibody was established via a series of immunoassays utilizing highly purified human Factor H and Factor H CCP fragments⁴. Firstly, the antibody was shown by ELISA to bind to purified Factor H immobilized in microtiter wells. Secondly, free (unbound) Factor H and human serum but not other complement proteins were shown (via inhibition EIA) to inhibit the binding of this antibody to immobilized Factor H. **Via Western Blot this antibody was shown to bind specifically to SCR-1 on both Factor H and Factor H Like Protein 1.**⁵

Applications

Quidel's complement monoclonals are tested for titer in ELISA using immobilized complement proteins or fragments at the time of QC release. Mid, point titers are reported on lot-specific C of A. For details of these experiments please contact Quidel Technical Support. Additional applications of these antibodies have been described in the literature and are provided below as a reference. As with all data of this type and because specific techniques differ from lab to lab, the provided information should be used as a guideline only. (Data on File at Quidel.)

EIA ⁵	RIA	WB ⁶	IHC	FACS
> 1 µg/ml	N/T	>1:100	N/T	>1:100

Species Cross Reactivity

Species cross reactivity was determined by measuring the ability of whole animal complement to inhibit binding of the antibody to solid phase purified human Factor H in an ELISA inhibition assay versus a human control material. This antibody cross reacted with sera from cynomolgous monkeys and baboons. Other sera not listed have not yet been tested or were not reactive. (Data on File at Quidel)

Related Products

A410:	Human Factor H
A229:	Monoclonal anti Factor H (#1)
A255:	Monoclonal anti Factor H (#3)
A312:	Goat Anti human Factor H

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. For customers with existing accounts, orders may also be placed by fax at (408) 616-4311 anytime. 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. Pangburn, MK. "Differences between the binding sites of the complement regulatory proteins DAF, CR1 and Factor H on C3 Convertases" *J Immunol* **136**:6 (1986).
2. Kraiczy, P, Würzner, R. "Complement escape of human pathogenic bacteria by acquisition of complement regulators" *Mol Immunol* **43**:31-44 (2006).
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5. Jokiranta, TS, et al. "Analysis of the recognition mechanism of the alternative pathway of complement by monoclonal anti-factor H antibodies: evidence for multiple interactions between H and surface bound C3b" *FEBS Ltr* **393**(2-3):297-302 (1996).
6. Junnikkala, S, et al. "Exceptional resistance of Human H2 Glioblastoma Cells to Complement Mediated Killing by Expression and Utilization of Factor H and Factor H Like Protein 1" *J Immunol* **164**(2000).
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