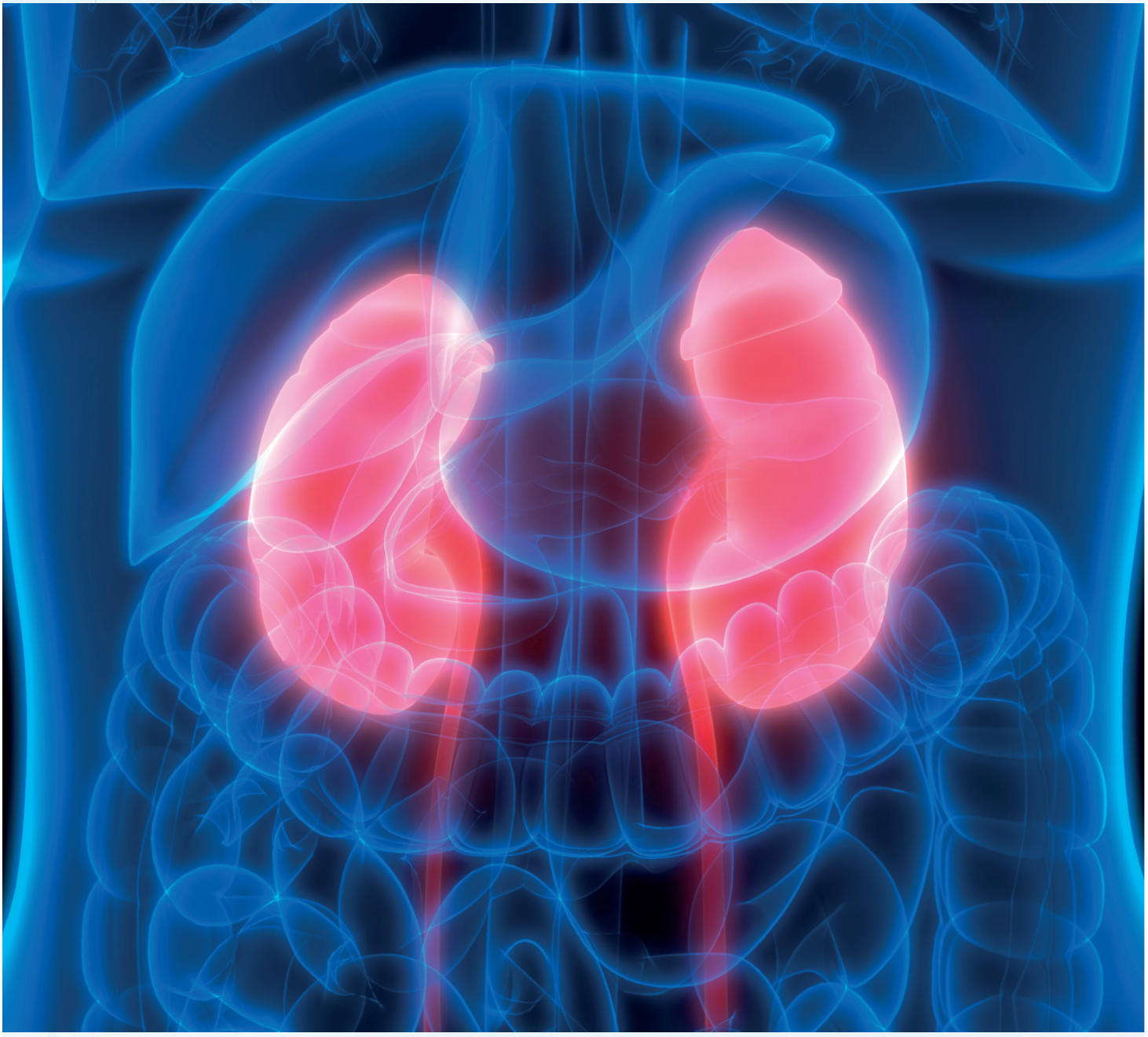
EIA

Anti-Factor H ELISA

Serological quantitative determination of IgG antibodies against complement factor H (CFH)

Generic Assays



Product Highlights

- Serological marker for atypical Hemolytic-Uremic Syndrome (aHUS)
- Differential diagnosis in acute renal failure
- Automatable on common open systems
- CE marked

Anti-Factor H ELISA

Differential Diagnosis of the atypical Hemolytic-Uremic Syndrome (aHUS)

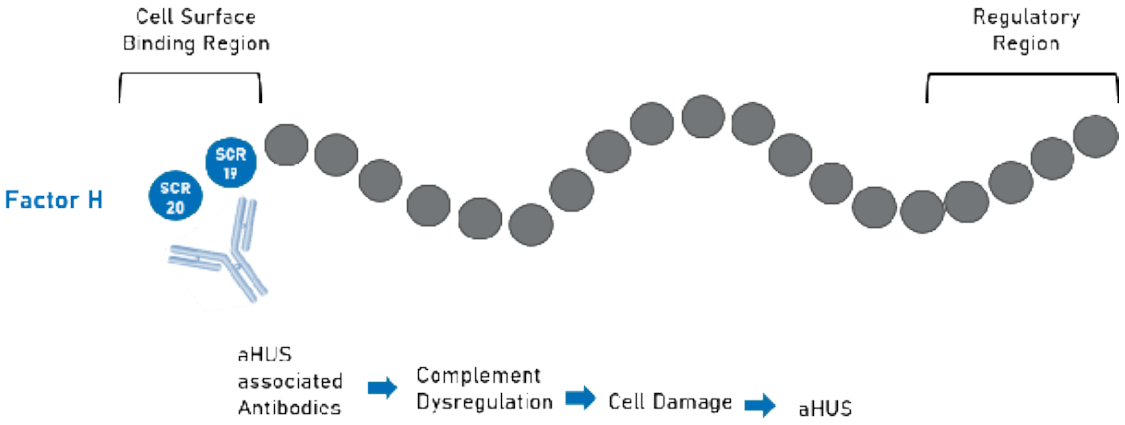
Hemolytic-uremic syndrome (HUS)

Hemolytic-uremic syndrome (HUS) is a disease affecting the small blood vessels, characterized by hemolytic anemia, thrombocytopenia, and acute renal failure.

A notable subtype is the atypical HUS (aHUS), also known as complement-mediated HUS, with a prevalence of 2-10 persons per million population[1], also depending on region and age. It is associated with dysregulation of the alternative complement regulation system, up to 25% mortality and the development of end-stage renal disease in approximately 50% of patients[2]. Risk factors for the manifestation of aHUS include:

- Mutations in the genes of complement regulators such as factor H (CFH), membrane cofactor protein (MCP), and factor I (CFI).
- Activating mutations in the genes of the complement proteins factor B and C3.
- Acquired dysfunction of the complement factor H (CFH), often caused by anti-factor H antibodies.

The antibodies have been shown to reduce binding to C3b and other C3 fragments. They perturb CFH-mediated cell surface protection, and in some individuals, the autoantibodies also impair cofactor activity or decay-accelerating activity. Atypical HUS accounts for about 5% of all HUS cases and does not present diarrheal symptoms or other signs of *E. coli* infection, as seen in the more common typical HUS. Typical HUS is usually triggered by infection with toxin-producing *Escherichia coli*, specifically strains producing Shiga toxin or Verotoxin. Understanding the risk factors for aHUS is crucial for its diagnosis and management, as it requires different therapeutic approaches than typical HUS.



Anti-Faktor H

Assays for the quantitative determination of IgG antibodies against complement factor H (CFH)

The Anti-Faktor H assay is a quantitative immunoassay for the detection of IgG antibodies against complement factor H in human serum. This assay aids in the diagnosis of atypical hemolyticuremic syndrome (aHUS) in conjunction with other clinical and laboratory findings. Autoantibodies to factor H have been associated with disease in 4% to 14% of aHUS patients[3].

The Anti-Faktor H assay is an enzyme-linked immunosorbent assay (ELISA), where the strips of the microtiter plate are coated with recombinant human factor H. Anti-factor H antibodies, if present in the patient's serum, bind to the immobilized antigens and a secondary anti-human IgG antibody, conjugated to the enzyme peroxidase, binds to the formed complex. The enzyme then converts a colorless substrate into a colored product. After stopping the reaction, the signal intensity is measured photometrically and is proportional to the antibody activity in the sample.

Designed for professional *in vitro* diagnostic use, this immunoassay provides accurate and reliable results. It is an essential tool for differentiating aHUS from other conditions e.g. typical HUS with similar symptoms, to ensure appropriate diagnosis and treatment.

Anti-Faktor H

- **Quantitative determination of IgG antibodies against factor H**
- **High sensitivity (92.3%) and specifity (95.7%)**
- **High precision**
- **Standardized CE marked IVD ELISA**

[1] Yan, k. *et al.*, Clin Epidemiol. 2020; 12: 295–305, Epidemiology of Atypical Hemolytic Uremic Syndrome: A Systematic Literature Review

[2] Joseph, C. *et al.*, Curr Opin Pediatr. 2013 ; 25(2): 209–215, Complement disorders and hemolytic uremic syndrome

[3] Kavanagh, D. *et al.*, Semin Nephrol. 2013; 33(6): 508–530, Atypical Hemolytic Uremic Syndrome

Anti-Factor H ELISA

- Quantitative determination of IgG antibodies against complement factor H
- Designed for *in vitro* diagnostic use offering flexibility and control during the test procedure
- Efficient test design allows for rapid analysis and timely availability of results
- Differential diagnosis in acute renal failure
- Automatable on common open systems
- CE marked

Product Information

Anti-Faktor H

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Order Information

Anti-Faktor H **REF 4067**
(48 Determinations)

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