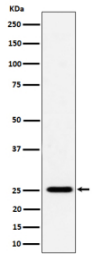
CFD Antibody / Complement Factor D [clone 30C23] (FY13055)

Catalog No.	Formulation	Size
FY13055	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	30C23
Purity	Affinity chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	P00746
Applications	Western Blot : 1:500-1:2000
Limitations	This CFD antibody is available for research use only.



Western blot analysis of CFD expression in human THP-1 cell lysate using the CFD antibody. Predicted molecular weight ~27 kDa.

Description

CFD antibody detects Complement factor D, encoded by the CFD gene. Complement factor D is a serine protease of the alternative pathway of complement activation, where it plays a pivotal role in amplifying immune responses. By cleaving factor B when complexed with C3b, Complement factor D generates the C3 convertase, which initiates a cascade of

complement activation leading to opsonization, inflammation, and pathogen clearance. CFD antibody provides researchers with a specific reagent to study innate immunity, complement biology, and inflammatory disease.

Complement factor D is secreted primarily by adipocytes and monocytes. Unlike many complement proteins, it circulates in an active form but with a restricted substrate range, cleaving only factor B bound to C3b. Studies with CFD antibody have shown that this specificity is essential for tight regulation of the alternative pathway. Because the alternative pathway provides continuous low level activity, factor D ensures rapid amplification once pathogens are detected, making it indispensable for innate defense.

Deficiency of Complement factor D is rare but results in increased susceptibility to infections, particularly with Neisseria species. Research with CFD antibody has confirmed that lack of factor D disrupts C3 convertase formation, impairing complement activation. Conversely, excessive factor D activity has been linked to inflammatory and autoimmune conditions, such as age related macular degeneration. Clinical studies have explored factor D inhibition as a therapeutic strategy to dampen overactive complement in retinal and renal disease.

CFD antibody is widely used in immunohistochemistry, western blotting, and ELISA. Immunohistochemistry demonstrates expression in adipose tissue and macrophages, while western blotting identifies circulating and tissue associated protein. ELISA with CFD antibody measures factor D levels in serum, supporting biomarker studies in complement driven diseases. These applications highlight the clinical and research significance of detecting Complement factor D.

By supplying validated CFD antibody reagents, NSJ Bioreagents supports research into complement activation, innate defense, and autoimmunity. Detection of Complement factor D provides insight into the balance between protective immunity and inflammatory pathology.

Application Notes

Optimal dilution of the CFD antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human CFD was used as the immunogen for the CFD antibody.

Storage

Store the CFD antibody at -20oC.