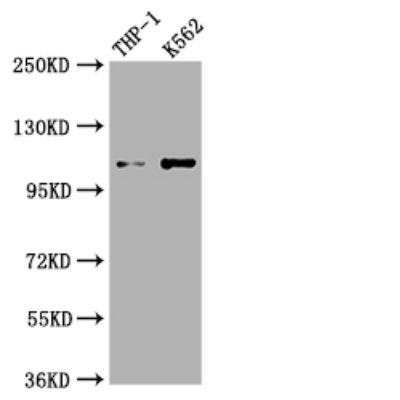
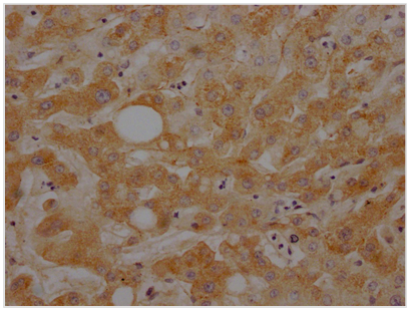
C3 Recombinant Monoclonal Antibody

Product Code	CSB-RA303909A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P01024
Immunogen	A synthesized peptide derived from human C3
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC, FC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200, FC:1:20-1:200
Relevance	C3 plays a central role in the activation of the complement system. Its processing by C3 convertase is the central reaction in both classical and alternative complement pathways. After activation C3b can bind covalently, via its reactive thioester, to cell surface carbohydrates or immune aggregates.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Neuroscience; Immunology
Gene Names	C3
Clone No.	4D12

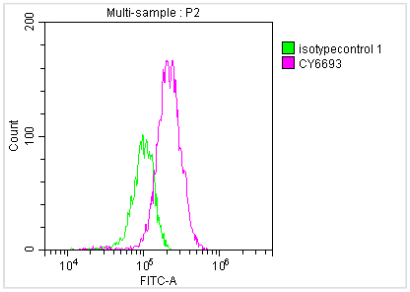
Image



Western Blot
Positive WB detected in: THP-1 whole cell lysate, K562 whole cell lysate
All lanes: C3 antibody at 1:1000
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 188 kDa
Observed band size: 115 kDa



IHC image of CSB-RA303909A0HU diluted at 1:100 and staining in paraffin-embedded human liver tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



Overlay histogram showing HepG2 cells stained with CSB-RA303909A0HU (red line) at 1:50. The cells were fixed with 70% Ethylalcohol (18h) and then incubated in 10% normal goat serum to block non-specific protein-protein interactions followedby the antibody (1µg/1*10^6 cells) for 1 h at 4?.The secondary antibody used was FITC-conjugated goat anti-rabbit IgG (H+L) at 1/200 dilution for 30min at 4?. Control antibody (green line) was Rabbit IgG (1µg/1*10^6 cells) used under the same conditions. Acquisition of >10,000 events was performed.

Description

The C3 recombinant monoclonal antibody can be utilized to identify human C3 protein in ELISA, WB, IHC, and FC applications. It is created using recombinant DNA technology. To synthesize the C3 monoclonal antibody gene, the cDNA of the C3 antibody-producing hybridomas is sequenced. The hybridomas are generated by fusing myeloma cells with B cells obtained from animals that were immunized with a synthesized peptide derived from human C3. The synthesized gene is cloned into a vector and then transfected into cells for cultivation. Following cultivation, the resulting C3 recombinant monoclonal antibody is purified through affinity chromatography from the cell culture supernatant.

Complement C3 is a key component of the complement system, which helps to identify and destroy foreign cells, such as bacteria and viruses or damaged cells through opsonization and the formation of the membrane attack complex (MAC). The activation of complement C3 occurs through several different pathways, including the classical pathway, the alternative pathway, and the lectin pathway. Once activated, C3 is cleaved into two fragments, C3a and C3b.