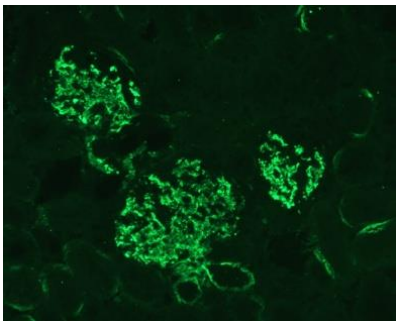
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	C3, Mouse, clone 11H9		
Catalog number	HM1045-100UG		
Lot number	-	**Expiry date**	-
Volume	1 ml	**Amount**	100 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	**Concentration**	100 µg/ml
Host Species	Rat IgG2a	**Conjugate**	None
Endotoxin	N.A.	**Purification**	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #	1,8		3,4	7		2,5,6		1
Yes	●		●	●		●		●
No		●						
N.D.					●		●	

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot



IF: C3 protein fragments deposited on kidney cells of MPL-lpr mouse. Staining with antibody 11H9 (Cat.# HM1045). Glomerular staining pattern.

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- IA: Antibody 11H9 was used as coating 0.5 µg/well in PBS.
- W: A reduced sample treatment and SDS-PAGE was used. The band sizes are ~110-115 kDa (α-chain), ~80 and 70 kDa (Ref.1).
- IHC-F: Tissue sections were fixed in acetone. Antigen retrieval was performed using 50% formic acid for 5 min or microwaved (700 W) in antigen unmasking solution (Ref 1, 3). As positive control brain sections of APPQ mice were used and as negative control isotype matched material.
- IF: Fixation in 4% paraformaldehyde in PBS pH 7.4. Vibratome sections of 4 µm. Pretreated with 3% hydrogen peroxide for 20 min to quench endogenous peroxidases. Microwaved in antigen unmasking solution for 2-5 minutes as antigen retrieval. (Ref.3).
- Positive control: MPL-lpr kidney cells; Negative control: wild type kidney cells

General Information

Description

The monoclonal antibody 11H9 recognizes mouse complement component C3 and its activation products, C3b, iC3b, C3d and C3dg. The complement system is an important part of the humoral response in innate immunity, consisting of three different pathways. The third complement component, C3, is central to the classical, alternative and lectin pathways of complement activation. Activation products of the complement cascade contain neo-epitopes that are not present in the individual native components. The complement factor C3 consists of an alpha- and a beta-chain.
The synthesis of C3 is tissue-specific and is modulated in response to a variety of stimulatory agents. C3 is the most abundant protein of the complement system with serum protein levels of about 1.3 mg/ml. An inherited deficiency of C3 predisposes the person to frequent assaults of bacterial infections. In ulcerative colitis, and idiopathic chronic inflammatory bowel disease, the deposition of C3 in the diseased mucosa has been reported.
Proteolysis by certain enzymes results in the cleavage of C3 into C3a and C3b. C3b becomes attached to immune complexes and is further cleaved into iC3b, C3c, C3dg and C3f. The monoclonal antibody 11H9 recognizes both intact C3 and its cleaved products C3b, iC3b, C3d and C3dg. These activation products are present in acute as well as

chronic inflammatory conditions. In chronic inflammatory condition, primarily the C3dg product resides at the place of inflammation (C3c being cleared) which is recognized by antibody 11H9. The chronic processing/activation of C3 is taking place at a lower level, which would reduce detection of the C3 fragments C3b, iC3b, and C3c.

Immunogen C57BL/6 thymocytes saturated with rat anti-Thy-1 monoclonal antibody of IgG2b subclass (RmT1)

Aliases Complement component C3, HSE-MSF

Gene Gene name: C3

References

1. Kremmer, E et al; Monoclonal antibodies to complement components without the need of their prior purification. II. Antibodies to mouse C3 and C4. Hybridoma 1990, *9*: 309
2. Pan, W et al; CR3 (CD11b/CD18) is the major macrophage receptor for IgM antibody-mediated phagocytosis of African trypanosomes: Diverse effect on subsequent synthesis of tumor necrosis factor a and nitric oxide. Microb Infect 2006, *8*: 1209
3. Zhou, J et al; Complement C3 and C4 expression in C1q sufficient and deficient mouse models of Alzheimer's disease. J Neurochem 2008, *106*: 2080
4. Heurich, B et al; Complement upregulation and activation on motor neurons and neuromuscular junction in the SOD1 G93A mouse model of familial amyotrophic lateral sclerosis. Journal of Neuroimmunology 2011*, 235*: 104
5. Lewis, R et al; CD55 Deficiency Protects against Atherosclerosis in ApoE-Deficient Mice via C3a Modulation of Lipid Metabolism. Am J Path 2011, *179*: 1601
6. Lesher, A et al; Combination of Factor H Mutation and Properdin Deficiency Causes Severe C3 Glomerulonephritis. Am Soc Nephrol 2013, *24*: 53
7. Antunes, A et al; The Phosphocarrier Protein HPr Contributes to Meningococcal Survival during Infection. PLos One 2015, *11*: e0162434
8. Ramaglia, V et al; Complement activation and expression during chronic relapsing. Clin Exp Immunol 2015, *180*:432

Storage&stability Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.

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Approved by Manager of QC	Date
Brenda Teunissen	12/11/2019

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.