

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	C5aR, Human, clone S5/1		
Catalog number	HM2094-20UG		
Lot number	-	Expiry date	-
Volume	200 µl	Amount	20 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA	Concentration	100 µg/ml
Host Species	Mouse IgG2a	Conjugate	None
Endotoxin	<24 EU/mg	Purification	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #	8	3,6		1,2,4,7	1,2			5
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

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 1:10.

- FC: Antibody S5/1 stains the N-terminal domain of CD88. 1x10⁶ leukocytes were incubated with 2µg of antibody (Ref. 1).
- FS: Antibody S5/1 inhibits C5a binding to its receptor at a concentration of 3.3µM (Ref. 2)
- IHC-P: Tissue sections were fixed in 2% paraformaldehyde and pretreated with 5% normal rabbit serum before applying antibody S5/1 (Ref. 3).
- W: extracts from smooth muscle cells were separated by SDS-PAGE, the observed band size with S5/1 antibody is 42kDa (Ref. 5).
- Positive control: Whole blood granulocytes; Negative control: Pulmonary or hepatic epithelial cells

General Information

Description	The monoclonal antibody S5/1 recognizes the human receptor for C5a (CD88). The C5a receptor is a seven transmembrane GTP-binding-protein-coupled receptor of 45kDa which binds with high affinity to human anaphylatoxin C5a. Upon C5a binding G-protein-dependent cellular responses are initiated such as increased intracellular Ca ²⁺ , granule fusion with the cell membrane, enzyme release and oxidative burst suggesting that C5aR is an important mediator of inflammation. The C5a receptor is expressed on a broad range of cell types, including neutrophils, monocytes/macrophages, dendritic cells, astrocytes and microglia. Interestingly, C5a receptor signalling has been associated with several inflammatory diseases including rheumatoid arthritis. Clone S5/1 was raised against a synthetic peptide comprising the N-terminal domain of the C5aR (Met1-Asn31). The antibody has been shown to inhibit the binding of C5a to its receptor.
Immunogen	Synthetic peptide comprising the N-terminal domain of the C5aR (Met1-Asn31)
Aliases	Complement component 5a receptor 1, CD88, C5aR, C5a anaphylatoxin receptor, CD88.
Cross reactivity	Rabbit: Yes (ref.9)
References	<ol style="list-style-type: none"> 1. Opperman, M et al; Probing the human receptor for C5a anaphylatoxin with side-directed antibodies. J Immunol 1993, 151: 3785 2. Opperman, M et al; Plasma clearance of the human C5a anaphylatoxin by binding to leucocyte C5a receptors. Immunol. 1994, 82: 516 3. Werfel, T et al; C5a receptors are detectable on mast cells in normal human skin and in psoriatic plaques but not in weal and flare reactions or in urticaria pigmentosa by immunohistochemistry. Arch Dermatol Res 1997, 289: 83 4. Zwirner, J et al; Evaluation of C3a receptor expression on human leucocytes by the use of novel monoclonal antibodies. Immunology 1999, 97: 166 5. Fortin, J et al; Contractile effect of anaphylatoxin C5a and of a mimetic peptide on the human umbilical artery: further evidence for leukocyte-dependent vasomotion. J Cardiovasc Pharmacol. 2002, 40:815 6. Gueler, F et al; Complement 5a receptor inhibition improves renal allograft survival. J Am Soc Nephrol 2008, 19: 2302

7. Strey, CW et al; Complement and neutrophil function changes after liver resection in humans. World J Surg 2009, 33: 2635
8. Werfel, T et al: CD88 antibodies specifically bind to C5aR on dermal CD117+ and CD14+ cells and react with a desmosomal antigen in human skin. J Immunol 1996, 157: 1729.
9. Petitclerc, E et al: Pathologic leukocyte infiltration of the rabbit aorta confers a vasomotor effect to chemotactic peptides through cyclooxygenase-derived metabolites. J Immunol 1996, 156: 3426

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

Precautions For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC
Brenda Teunissen

Date
14/07/2021

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