

**CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET**

<b>Product name</b>	C5a, Human, Recombinant (E.coli-derived)		
<b>Catalog number</b>	HC2101		
<b>Lot number</b>	-	<b>Expiry date</b>	-
<b>Volume</b>	Reconstitute with 0.5 ml distilled/de-ionized water	<b>Activity</b>	N.A.
<b>Formulation</b>	Lyophilized in 0.005% Tween 80+2mM reduced L-glutathion+0.2mM oxidized L-glutathion+0.1M Tris-Cl buffer, pH 8.0	<b>Amount</b>	>50 µg
<b>Host Species</b>	Human, E.coli-derived	<b>Concentration</b>	N.A.
<b>Endotoxin</b>	<24 EU/mg	<b>Purification</b>	N.A.
<b>Storage</b>	4°C	<b>Purity</b>	N.A.

**Application notes**

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #					1-5			
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

For dilutions use protein stabilized phosphate buffered saline, pH 7.4.

**General Information**

<b>Description</b>	<p>Complement fragment C5a is a 74-residu glycopolypeptide which is generated by proteolytic cleavage of the complement factor C5 in the course of complement activation. C5a is a potent chemoattractant and anaphylatoxin that acts on all classes of leukocytes and on many other cell types including endothelial, smooth muscle, kidney, liver, and neural cells. In addition to its proinflammatory effects, C5a has been shown to protect cells against toxic insult and to stimulate proliferation in neurons and hepatocytes, suggesting a wider role for C5a in homeostasis. C5a is rapidly desarginated by serum carboxypeptidase N to the less potent derivate C5a desArg, the first stage in deactivation of anaphylatoxin activity. The C5a desArg form has a different spectrum of bioactivity to intact C5a. Recombinant human C5a is His-Tagged and has the following amino acid sequence:</p> <p><b>MRGSHHHHHHGSDDYDPTTENLYFQGGSTLQKKIEEIAAKYKHSVVKCCYDGCVNNDTCEQRAARISLGRPCIKAFTECCVVASQLRANISHKDMQLGR.</b></p>
<b>References</b>	<ol style="list-style-type: none"> <li>Xu, R et al; Complement 5a stimulates hepatic stellate cells in vitro, and is increased in the plasma of patients with chronic hepatitis B. Immunology 2012, 138:228</li> <li>Geering, B et al; DAPK2 positively regulates motility of neutrophils and eosinophils in response to intermediary chemoattractants. J Leuk Biol 2014, 95:293</li> <li>Van den Berg, C et al; Mechanism of Neutrophil Dysfunction: Neutrophil Serine Proteases Cleave and Inactivate the C5a Receptor. J Immunol 2014, 192:1787</li> <li>Hünniger, K et al; A Second Stimulus Required for Enhanced Antifungal Activity of Human Neutrophils in Blood Is Provided by Anaphylatoxin C. J Immunol 2015, 194:1199</li> <li>Maeda, Y et al; C5aR is frequently expressed in metastatic renal cell carcinoma and plays a crucial role in cell invasion via the ERK and PI3 kinase pathways. Oncol Rep 2015, 33:1844</li> </ol>
<b>Storage&amp;stability</b>	Lyophilized product should be stored at 4°C. Store stock solution in aliquots at -20°C. Repeated freeze and thaw cycles will cause loss of activity. Under recommended storage conditions, product is stable for at least one year.
<b>Precautions</b>	Caution: vial is under vacuum. 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  
Robbert Zwinkels

Date  
23/03/2018

Do you have any questions or comments regarding this product? Please contact us via [support@hycultbiotech.com](mailto:support@hycultbiotech.com).