Active Complement Component 5a (C5a)

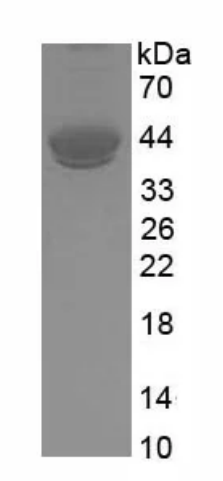
Catalog#:PHH12351

概述（Summary）

纯度（Purity）	Greater than 95% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Thr678-Arg751】
Accession #	P01031
表达宿主（Host）	293F
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	35.0 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Activation of C5 by a C5 convertase initiates the spontaneous assembly of the late complement components, C5-C9, into the membrane attack complex. C5b has a transient binding site for C6. The C5b-C6 complex is the foundation upon which the lytic complex is assembled.; Derived from proteolytic degradation of complement C5, C5a anaphylatoxin is a mediator of local inflammatory process. Binding to the receptor C5AR1 induces a variety of responses including intracellular calcium release, contraction of smooth muscle, increased vascular permeability, and histamine release from mast cells and basophilic leukocytes. C5a is also a potent chemokine which stimulates the locomotion of polymorphonuclear leukocytes and directs their migration toward sites of

inflammation.

电泳图（SDS-PAGE image）



Greater than 95% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

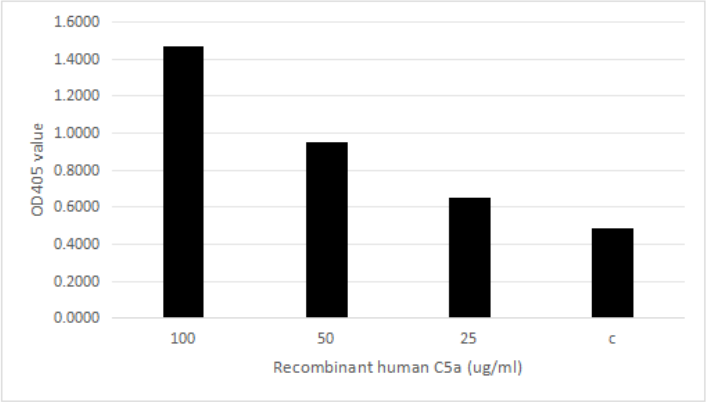
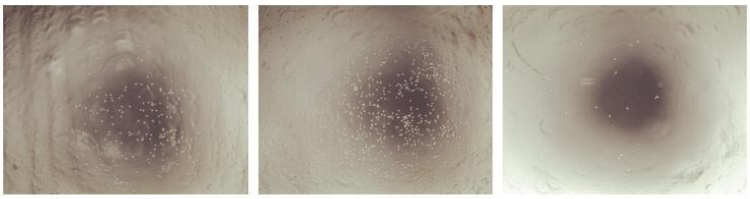


Figure 3. The activity of rhC5a on differentiated U937 cells

Complement Component 5a (C5a) is a component of the complement system which plays a key role in promoting migration and adherence of neutrophils and monocytes to vessel walls. C5a has been proven to be able to induce chemotactic migration of THP-1 cells. Therefore, chemotaxis assay used 24-well microchemotaxis system was undertaken to detect the chemotactic effect of C5a on the human monocytic cell line THP-1. Briefly, THP-1 cells were seeded into the upper chambers (100μL cell suspension, 106 cells/mL in RPMI 1640 with 0.5% FBS) and C5a (50ng/mL and 100ng/mL diluted separately in serum free RPMI 1640) was added in lower chamber with a polycarbonate filter (8μm pore size) used to separate the two compartments. After incubation at 37oC with 5% CO2 for 2h, the filter was removed, then cells in low chamber were observed by inverted microscope at low magnification (×100) and the number of migrated cells were counted at high magnification (×400) randomly (five fields for each filter). Result: C5a is able to induce migration of THP-1 cells. The migrated THP-1 cells in low chamber at low magnification (×100) were shown in Figure 1. Five fields of each chamber were randomly chosen to count the migrated cells at high magnification (×400) and the statistical data was shown in Figure 2. (A) THP-1 cells were seeded into the upper chambers and 50ng/mL C5a was added in lower chamber, then cells in lower chamber were observed at low magnification (×100) after incubation for 3h; (B) THP-1 cells were seeded into the upper chambers and 100ng/mL C5a was added in lower chamber, then cells in lower chamber were observed at low magnification (×100) after incubation for 3h; (C) THP-1 cells were seeded into the

upper chambers and serum free RPMI 1640 without C5a was added in lower chamber, then cells in lower chamber were observed at low magnification (×100) after incubation for 3h. Figure. The chemotactic effect of C5a on THP-1 cells. Figure. The chemotactic effect of C5a on THP-1 cells The activity of recombinant human C5a was also measured by its ability to induce N-acetyl-β-D-glucosaminidase release from differentiated U937 human histiocytic lymphoma cells. 3.2*106 differentiated U937 cells were added to the 24-well plate and different concentrations of rhC5a was added to the 24-well plate and incubated at 37 ℃ for 3min. The cells were centrifuged at 400 g for 3min, and the supernatant contained N-acetyl-β-D-glucosaminidase. The enzyme activity of N-acetyl-β-D-glucosaminidase was measured by the substrate of 4-Nitrophenyl 2-acetamido-2-deoxy-β-D-glucopyranoside. The result was shown in figure 1, It was obvious that rhC5a can significantly induce N-acetyl-β-D-glucosaminidase release.



A B C

注意事项（Note）

For Research Use Only , Not for Diagnostic Use.