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# SCIENTIFIC

# C5a Mouse

**Description:**C5a Mouse Recombinant produced in E.Coli is a single, non-glycosylated, Polypeptide chain containing 77 amino acids and having a molecular mass of 9kDa.The Mouse C5a is purified by proprietary chromatographic techniques.

Synonyms: Complement C5, Hemolytic complement, C5, Hc, He, C5a.

Source: Escherichia Coli.

Physical Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

**Amino Acid Sequence:** The sequence of the first five N-terminal amino acids was determined and was found to be Asn-Leu-His-Leu-Leu.

**Purity:**Greater than 95.0% as determined by:(a) Analysis by RP-HPLC.(b) Analysis by SDS-PAGE.

## Formulation:

Mouse C5a was lyophilized from a concentrated (1mg/ml) solution in 20mM PB, pH 7.5 and 350mM NaCl.

#### Stability:

Lyophilized Mouse C5a although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Mouse C5a should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.

## Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

## Solubility:

It is recommended to reconstitute the lyophilized Mouse C5a in sterile 18M-cm H2O not less than 100

## Introduction:

Mouse Complement 5a (C5a) is a glycoprotein which is a member of a family of structurally and functionally related proteins known as anaphylatoxins. C5a is a 77 a.a. peptide created by the C5a convertase proteolytic cleavage of C5 chain in the classical and alternative complement pathway (C4b2a3b, C3bBb3b). The mouse C5a has four helices and three intrachain disulfide bonds which form a triple loop structure. C5a functions through G-protein coupled receptor (GPCR) (C5aR/CD88). C5a is a effective chemoattractant and anaphylatoxin which functions on all classes of leukocytes and on many other cell types including endothelial, smooth muscle, kidney, liver, and neural cells. Mouse C5a also mediates IL-8 release from bronchial epithelial cells. Furthermore, it triggers an oxidative surge in macrophages and neutrophils, causing the release of histamine in basophils and mast cells. The C5a anaphylatoxin activity on hepatocytes results indirectly from interaction with nonparenchymal cell via prostanoid secretion.

# **Biological Activity:**

The ED50 of Recombinant Mouse C5a as determined by its ability to induce







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N-acetyl-b-D-glucosaminidase release from differentiated U937 human histiocytic lymphoma cells was 5-20ng/ml.



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