Recombinant Mouse Hemolytic Complement

Cat. No. Hc-3625M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse C5a produced in E.coli is a single, non-glycosylated, polypeptide chain containing 77 amino acids and having a molecular mass of 9 kDa.
Species	Mouse
Source	E.coli
Description	Mouse Complement 5a (C5a) is a glycoprotein that belongs to a family of structurally and functionally related proteins known as anaphylatoxins. C5a is a 77 amino acid (aa) peptide that is created by the C5a convertase proteolytic cleavage of C5 αchain in the classical and alternative complement pathway (C4b2a3b, C3bBb3b). Mouse C5a has fourαhelices, plus three intrachain disulfide bonds that form a triple loop structure. C5a functions via G-protein coupled receptor (GPCR) (C5aR/CD88). 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. It mediates IL-8 release from bronchial epithelial cells. It also triggers an oxidative burst in macrophages and neutrophils, causing release of histamine in basophils and mast cells.C5a anaphylatoxin activity on hepatocytes results indirectly from interaction with nonparenchymal cell via prostanoid secretion. Mouse C5a shares 60% and 82% aa sequence identity to human and rat C5a,respectively.
Biological Activity	The ED50 of rmC5a as determined by its ability to induce N-acetyl-ß-D-glucosaminidase release from differentiated U937 human histiocytic lymphoma cells was 5-20ng/ml.

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Purity	Greater than 95% as determined by (a) Analysis by RP-HPLC; (b) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.
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.
Endotoxin	Less than 0.1ng/μg (1.0EU/μg) of rHuGalectin-8 as determined by LAL test.
Form	The protein was lyophilized from a concentrated (1mg/ml) solution in 20mM PB, pH 7.5, 350mM NaCl buffer.
Reconstitution	It is recommended to reconstitute the lyophilized rmC5a in sterile 18MΩ-cm H2O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.
Storage	Lyophilized rmC5a although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rmC5a should be stored at 4°C between 2-7 days and for future use below -18°C. For long-term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please avoid freeze-thaw cycles.

GENE INFORMATION

Gene Name	Hc hemolytic complement [Mus musculus]
Official Symbol	Hc
Synonyms	Hc;hemolytic complement; C5; He; C5a; complement C5; OTTMUSP00000013195
Gene ID	15139
mRNA Refseq	NM_010406

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Protein Refseq	NP_034536
UniProt ID	P06684
Chromosome Location	2 cen-C1; 2 23.5 cM
Function	C5a anaphylatoxin chemotactic receptor binding; endopeptidase inhibitor activity

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