

## C3

### Native Human Complement C3a desArg

<b>Catalog No.</b>	CSI19502	<b>Quantity:</b>	50 µg
<b>Alternate Names:</b>	Complement C3a desArg, Complement component 3a desArg,		
<b>Description:</b>	Human C3a desArg is prepared from normal human serum after activation of C3 by human C3 convertase, followed by the removal of the C-terminal arginine by the natural carboxypeptidase N. C3a is a member of the anaphylatoxin family of three proteins (C3a, C4a and C5a) produced by the activation of complement. C3a mediates many inflammatory responses including smooth muscle contraction, vasodilation, increased vascular permeability, and release of histamine from mast cells and basophils. These activities of C3a are inactivated by removal of the C-terminal arginine and this is complete within minutes after formation in plasma. However, new activities have been identified for C3a desArg acting through the C5L2 receptor. These activities were first assigned to ASP (acylation-stimulating protein), but this was later shown to be identical to C3a desArg. C3a desArg binds to C5L2 with a K <sub>d</sub> of approximately 70 nM. In adipocytes, macrophages, fibroblasts and many other cells triglyceride synthesis, glucose transport, and fatty acid uptake are stimulated upon C3a desArg binding in both humans and mice. C3 knockout mice lack ASP function and recombinant C3a desArg is fully functional while C5L2 knockout mice are unresponsive. Many of the biological functions of insulin are expressed by C3a desArg and it also expresses endocrine effects on insulin secretion by pancreatic cells		
<b>UniProt ID:</b>	P01024		
<b>Source:</b>	Human serum		
<b>Molecular Weight:</b>	8933 Da (76 aa) monomer		
<b>Formulation:</b>	Sterile-filtered PBS, pH 7.2		
<b>Extinction Coefficient:</b>	$E_{276nm}^{0.1\%} = 0.41$		
<b>Purity:</b>	≥ 96% by SDS-PAGE		
<b>Volume:</b>	lot specific		
<b>Concentration:</b>	0.5 mg/ml, lot specific		
<b>Contaminants:</b>	< 1.0% C3a by HPLC		
<b>Amino Acid Sequence:</b>	SVQLTEKRMD KVGKYPKELR KCCEDGMREN PMRFSCQRRT RFISLGEACK KVFLDCCNYI TELRRQHARA SHLGLA		
<b>Storage &amp; Stability:</b>	Store unopened, as supplied at -80°C for up to 1 year. Thaw vial quickly in a 37°C water bath, mix, and immediately place on ice. Prepare aliquots, store at -80°C. <b>&gt;10% activity loss per thaw. Avoid freeze/thaw.</b>		
<b>Infectious Disease Statement:</b>	Prepared from serum shown by FDA-certified tests to be negative for HBsAg, negative by anti-Hbc, HCV, HIV-1/2, Syphilis and negative by NAT for RNA from HIV-1, HCV, HBV, Zika, HTLV-1/2, WNV.		
<b>Country of Origin:</b>	USA		

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