

32-3383: C3c Native Protein

Alternative Name : Complement C3c, Complement Component C3c, C3c.

Description

Source : Human Plasma. Human C3c produced in Human Plasma having a molecular mass of 137 KDa. Complement C3c consists of three peptides: C3c Beta chain (23-667), C3c alpha chain fragment 1 (749-954) and C3c alpha chain fragment 2 (1321-1663) joined together by disulphide bonds. The C3c component is central in both complement activation pathways, with different specific proteolytic systems cleaving it to form C3 convertase. Cleavage of C3 releases C3a and the C3b fragment which is part of the alternative C3 convertase. C3 levels can be low because of decreased synthesis or due to consumption. High C3 levels are seen in highly acute or chronic inflammation, hepatic cholestasis and during the third trimester of pregnancy. Unwanted complement activation is a major cause of tissue damage in various pathological conditions and contributes to quite a few immune complex diseases. Compstatin is an effective inhibitor of the activation of complement component C3 and thus blocks a central and essential step in the complement cascade. The specific binding site on C3, the configuration in the bound form, and the exact mode of action of compstatin are unknown. The crystal structure of compstatin in complex with C3c reveals that the compstatin-binding site is formed by the macroglobulin (MG) domains 4 and 5. This binding site is part of the structurally stable MG-ring created by domains MG1-6 and is distant from any other known binding site on C3. Compstatin does not modify the conformation of C3c, while compstatin itself undergoes a large conformational alteration upon binding.

Product Info

Amount :	1 mg
Purification :	Greater than 96.0%.
Content :	The Human Complement C3c was lyophilized in a sodium phosphate buffer, pH 7.2, containing 0.15M NaCl.
Storage condition :	Human C3c although stable at room temperature for 3 weeks, should be stored between 2-8°C.
Amino Acid :	<p>C3c Beta chain (23-667)SPMYSIITPNILRLESEETMVLEAHDAQGDVPVTVVHDFPGKKLVLSSEKTVLTPATNHMGNVFTTIP ANREFKSEKGRNKFVTVQATFGTQVVEKVVLSLQSGYLFIQTDKIYTPGSTVLYRIFTVNHKLLPVGRTVMVNI ENPEGIPVKQDSLSSQNQLGVLPLSWDIPELVNMGQWKIRAYYENSPQQVFSTEFVKEYVLPSEFVIVEPEKFK YYIYNEKGLEVTITARFLYGKKVEGTAFFVIFGIQDGEQRISLPESLKRIPIEDGSGEVVLSRKVLLDGVQNPRAEDL VGKSLYVSATVILHSGSDMVQAERSGPIVTSFYQIHFTKTPKYFKPGMPFDLMVFVTNPDGSPAYRVPVAVQGE DTVQSLTQGDGVAKLSINTHPSQKPLSITVTRTKKQELSEAEQATRTMQALPYSTVGNSNNYLHLSVLRTELRLPG ETLNVNFFLLRMDRAHEAKIRYYTYLIMNKGRLKCC3c alpha chain fragment 1 (749-954)SNLDEDIIEENIVSRSEFPESWLWNVEDLKEPPKNGISTKLMNIFLKDSITTWEILAVSMSDDKKGICV ADPFVETVMQDFFIDLRLPYSVVRNEQVEIRAVLYNYRQNELKVRVELLHNPACSLATTKRRHQQTVTIPPKS SLSVPYVIVPLKTGLQEVEVKAAYVHHFISDGVRSKLVVPEGIRMNKTAVRTLDPERLGRCC3c alpha chain fragment 2 (1321-1663)SEETKENEGFTVTAEGKGQGTLSVVTMYHAKAKDQLTCNKFDLKVTIKPAPETEKRPQDAKNTM ILEICTRYRGDQDATMSILDISMGTGFAPDTHDLKQLANGVDRIYISKYELDKAFSDRNTLIYLDKVSHEDDCLA FKVHQYFNVELIQPGAVKVYAYYNLEESCTRFYHPEKEDGKLNKCRDELRCRAEENCFIQSDDKVTLEERLDK ACEPGVDYVYKTRLVKVQLSNDFFDEYIMAEQTIKSGSDEVQVQVQRTFISPIKCREALKLEEKHYLMWGLSSD FWGEKPNLSYIIGKDTWVEHWPEEDECQDEENQKQCQDLGAFTESMVVFGCPN</p>

Application Note

It is recommended to reconstitute the lyophilized C3c in de-ionized water.

