

## Recombinant Human C5, His-tagged

**Cat. No.** C5-26131TH    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant fragment, corresponding to amino acids 678-750 of Human C5 / C5a desArg with an N terminal His tag and tev protease sequence, 101 amino acids, predicted MW 11.3 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>ProteinLength</b>    | 678-750 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Description</b>      | <p>The protein encoded by this gene is the fifth component of complement, which plays an important role in inflammatory and cell killing processes. This protein is comprised of alpha and beta polypeptide chains that are linked by a disulfide bridge. An activation peptide, C5a, which is an anaphylatoxin that possesses potent spasmogenic and chemotactic activity, is derived from the alpha polypeptide via cleavage with a convertase. The C5b macromolecular cleavage product can form a complex with the C6 complement component, and this complex is the basis for formation of the membrane attack complex, which includes additional complement components. Mutations in this gene cause complement component 5 deficiency, a disease where patients show a propensity for severe recurrent infections. Defects in this gene have also been linked to a susceptibility to liver fibrosis and to rheumatoid arthritis.</p> |
| <b>Conjugation</b>      | HIS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Form</b>                     | Lyophilised: Reconstitute the vial by injection of 0.5 ml distilled or de-ionised water. Store stock solution after reconstitution in aliquots at -20°C. Repeated freeze and thaw cycles cause loss of activity. For dilutions use protein stabilized phosphate buffer. |
| <b>Storage buffer</b>           | Preservative: None<br>Constituents: PBS                                                                                                                                                                                                                                 |
| <b>Storage</b>                  | Store at +4°C.                                                                                                                                                                                                                                                          |
| <b>Sequences of amino acids</b> | MRGSHHHHHHGSDYDIPTTENLYFQGGSTLQKKIEEIAAK YKHSVVKKCCYDGACV<br>NND ETC EQRAARISLGPRCIKA FTECCVVASQLRANISHKDMQLG (His-tag is underlined, bold sequence is TEV protease)                                                                                                    |

## GENE INFORMATION

|                            |                                                    |
|----------------------------|----------------------------------------------------|
| <b>Gene Name</b>           | C5 complement component 5 [ Homo sapiens ]         |
| <b>Official Symbol</b>     | C5                                                 |
| <b>Synonyms</b>            | C5; complement component 5; complement C5; CPAMD4; |
| <b>Gene ID</b>             | 727                                                |
| <b>mRNA Refseq</b>         | NM_001735                                          |
| <b>Protein Refseq</b>      | NP_001726                                          |
| <b>MIM</b>                 | 120900                                             |
| <b>Uniprot ID</b>          | P01031                                             |
| <b>Chromosome Location</b> | 9q33-q34                                           |

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|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Pathway</b>  | Activation of C3 and C5, organism-specific biosystem; Class A/1 (Rhodopsin-like receptors), organism-specific biosystem; Complement Activation, Classical Pathway, organism-specific biosystem; Complement and coagulation cascades, organism-specific biosystem; Complement and coagulation cascades, conserved biosystem; |
| <b>Function</b> | C5a anaphylatoxin chemotactic receptor binding; chemokine activity; endopeptidase inhibitor activity; receptor binding;                                                                                                                                                                                                     |

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