# Recombinant CFAD protein (His tag)

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| **Catalog Number** | 541964 |
| **Synonyms** | Adipsin; C3 convertase activator; Properdin factor D |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | P00746 |
| **Molecular Weight** | Predictes a molecular mass of 26.06 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 26 kDa band. |

## Product Information

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| **Sequence Region** | 26-253 |
| **Form** | Lyophilized powder |
| **Formulation** | Lyophilized from sterile PBS, pH 7.4 |
| **Purity** | >86%, by SDS-PAGE with Coomassie Brilliant Blue staining. |
| **Endotoxin** | Not tested. |
| **Activity** | Not tested. |
| **Stability** | Samples are stable for up to twelve months from date of receipt at -70℃ |
| **Protein Construction** | DNA encoding 26-253 aa (P00746) were fused with 6His tag. |

## Storage & Handling

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| **Reconstitution** | Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. |
| **Storage** | Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. |
| **Shipping** | In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature.<br>Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise. |

## Description

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| **Description** | Recombinant Human Complement Factor D (Adipsin) Fragment (aa 26-253) is a high-purity protein designed for studying the alternative complement pathway. This fragment contains the full Peptidase S1 domain, enabling researchers to investigate its serine protease activity and role in immune response amplification with precision.<br>Complement Factor D (CFD), also known as Adipsin, is a secreted serine protease (EC 3.4.21.46) that initiates the alternative pathway of the complement system. This cascade of proteins leads to phagocytosis and breakdown of pathogens while strengthening adaptive immune signaling. Unlike other complement pathways activated directly by pathogens or antigen-antibody complexes, the alternative pathway begins with spontaneous hydrolysis of complement C3. CFD acts as a critical amplification loop by cleaving factor B (CFB) when complexed with C3b, thereby activating the C3 convertase of the alternative pathway. The protein is naturally secreted in humans and plays a fundamental role in innate immune defense mechanisms. |