Cytokines

Human Recombinant Complement Factor D

Complement factor D, His tag

Catalog #100-1330

50 µg

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Product Description

Complement factor D, also known as adipsin, is a serine protease belonging to the S1 peptidase family. This protein is secreted by adipocytes into circulating blood and is also expressed by macrophages and monocytes (White et al.). It contains a His-residue tag at the carboxyl end of the polypeptide chain. Complement factor D is a component of the alternative pathway of the complement system and a part of the innate immune system, and it plays a role in the defense against infection (Barratt and Weitz). In the initiation phase of the complement pathway, complement factor D cleaves complement factor B (bound to component C3) to produce a complex known as C3 convertase. During the amplification phase, complement factor D cleaves complement factor B (bound to component C3b) to produce the C3bBb convertase and is involved in the propagation of complement activation. Apart from its immunological role, complement factor D is involved in other physiological processes, like the efficient clearing of damaged cell debris by phagocytes following acute liver injury (Cresci et al.). Deficiency in complement factor D is linked to increased susceptibility to pathogens like *Neisseria meningitidis* (Biesma et al.).

Product Information

Alternative Names:	Adipsin, ADN, DF, Factor D protein, PFD
Accession Number:	P00746 (Ile26-Ala253) was expressed with a polyhistidine tag at the C-terminus.
Amino Acid Sequence:	ILGGREAEAH ARPYMASVQL NGAHLCGGVL VAEQWVLSAA HCLEDAADGK VQVLLGAHSL SQPEPSKRLY DVLRAVPHPD SQPDTIDHDL LLLQLSEKAT LGPAVRPLPW QRVDRDVAPG TLCDVAGWGI VNHAGRRPDS LQHVLLPVLD RATCNRRTHH DGAITERLMC AESNRRDSCK GDSGGPLVCG GVLEGVVTSG SRVCGNRKKP GIYTRVASYA AWIDSVLAAH HHHHHHHHH
Predicted Molecular Mass:	25.8 kDa
Species:	Human
Formulation:	Lyophilized from sterile PBS, pH 7.4. Trehalose (5 - 8%), mannitol, and 0.01% TWEEN® 80 are normally added as protectants before lyophilization.
Source:	HEK293 cells

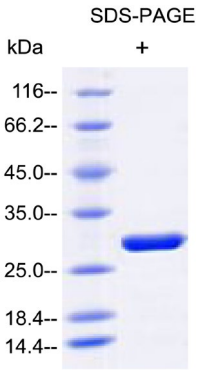
Specifications

Activity:	Not available
Purity:	≥ 94%
Endotoxin Level:	Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 1 EU/µg protein.

Preparation and Storage

Storage:	Store at -20 to -80°C.
Stability:	Stable as supplied for 12 months from date of receipt.
Preparation:	Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.25 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. As a general guide, do not store at 2 - 8°C for more than 1 month or at -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

Data



Human Recombinant Complement Factor D was resolved with SDS-PAGE under reducing (+) conditions and visualized by Coomassie Blue staining. Human Recombinant Complement Factor D has a predicted molecular mass of 25.8 kDa and an apparent molecular mass of 33 kDa due to glycosylation.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines, or contact us at techsupport@stemcell.com.

References

Barratt J & Weitz I. (2021) Complement factor D as a strategic target for regulating the alternative complement pathway. Front Immunol 12: 712572.

Biesma DH et al. (2001) A family with complement factor D deficiency. J Clin Invest 108(2): 233–40.

Cresci GA et al. (2015) Alternative complement pathway component factor D contributes to efficient clearance of tissue debris following acute CCl_4-induced injury. Mol Immunol 64(1): 9–17.

White RT et al. (1992) Human adipsin is identical to complement factor D and is expressed at high levels in adipose tissue. J Biol Chem 267(13): 9210–3.