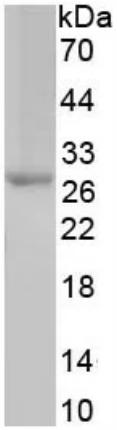
Active Complement Factor D (CFD)

Catalog#:PER12753

概述（Summary）

别称（Alternative Names）	CF-D; DF; PFD; ADN; Adipsin; Properdin Factor D; C3 convertase activator
纯度（Purity）	Greater than 95% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Met1-Ala263】
Accession #	P32038
表达宿主（Host）	E.coli
种属（Species）	Rattus norvegicus (Rat)
预测分子量（Predicted MW）	29.7 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Factor D cleaves factor B when the latter is complexed with factor C3b, activating the C3bbb complex, which then becomes the C3 convertase of the alternate pathway. Its function is homologous to that of C1s in the classical pathway.

电泳图（SDS-PAGE image）



Greater than 95% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

$$\text{Specific Activity (pmol/min/ug)} = \frac{\text{Adjusted } V_{max}^{*} \text{ (OD/min) x well volume (L) x } 10^{12} \text{ pmol/mol}}{\text{ext. coeff}^{**} \text{ (M}^{-1}\text{cm}^{-1}\text{) x path corr.}^{***} \text{ (cm) x amount of enzyme (ug)}}$$

*Adjusted for Substrate Blank
**Using the extinction coefficient 13260 $M^{-1}cm^{-1}$
***Using the path correction 0.320 cm

Complement Factor D (CFD) is a serine protease that catalyzes the initial proteolytic step in the alternative pathway of complement. Expressed in adipose tissue at high levels, factor D is also known as adipsin. It is an exceptionally specific protease and the only known protein substrate is factor B in complex with C3. Factor D protease activity is regulated by reversible conformational changes, which differs from the majority of serine proteases whose regulation involves either activation by processing of the zymogens or inactivation by binding of the inhibitors. Compared to its physiologically important proteolytic activity, factor D has much lower activity toward synthetic peptide substrates. However, thioester substrates have been routinely used for assessing factor D activity. The full-length (amino acid residues 1-263) of rat CFD was expressed which activity was measured by its ability to cleaves a thioester substrate Z-Lys-SBzl•HCl. The reaction was performed in 50 mM Tris, 1 M NaCl, pH 7.5 (Assay Buffer), initiated by addition 50 µL of various concentrations of CFD (diluted by Assay Buffer) to 50 µl substrate mixture of 0.2mM Z-Lys-SBzl•HCl and 0.2 mM DTNB. The final well serves as a negative control with no CFD, replaced with 50 µl assay buffer. Then read in kinetic mode for 5 minutes at an absorbance of 405 nm. The specific activity of recombinant rat CFD is > 10000 pmol/min/µg.

注意事项（Note）

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