

COBRA VENOM FACTOR

Cobra Venom Anticomplementary Protein



Product characteristics

Product description

CVF is a glycoprotein composed of three non-identical disulfide-bonded subunits with mw of 68 kDa (α), 48 kDa (β), and 30 kDa (γ). CVF is a structural and functional analog of cobra, as well as mammalian C3. In the presence of Factor B, Factor D, and Mg^{2+} , CVF can form a stable CVF,Bb complex which is a C3/C5 convertase enzyme; however, the CVF,Bb complex is not susceptible to regulation by Factors H and I.

FOR RESEARCH ONLY, NOT FOR HUMAN OR DRUG USE

Used for: immuno-suppression, deplementing blood *in vivo* and *in vitro*

Product profile

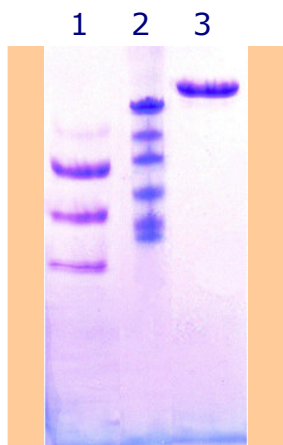
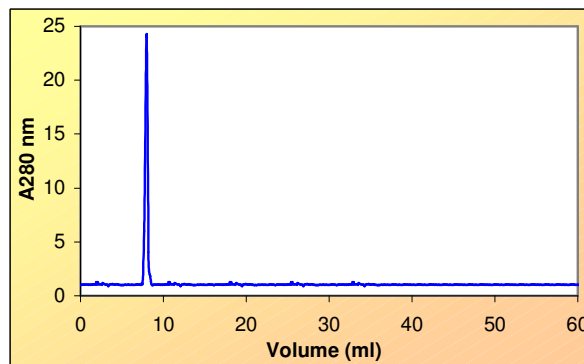
Source: *Naja naja kaouthia* venom
mw: about 150 kDa
Purified by ion exchange chromatography

Biochemical purity

HPLC analysis

CVF was analysed on a Protein C4 column (Grace Vydac), eluted with a 0-60% acetonitrile gradient in 0.05% trifluoroacetic acid, with a 1% per minute concentration increase at a flow rate of 0.2 ml/min.

CVF purity was more than 99%.

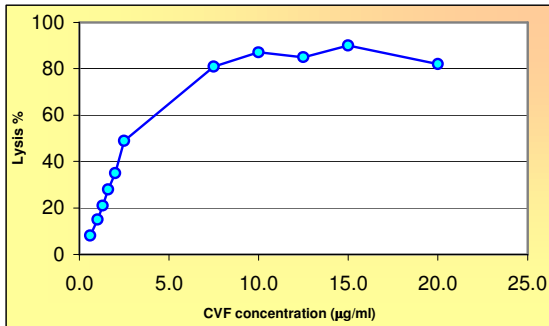


SDS polyacrylamide gel electrophoretic analysis

SDS-PAGE was performed on a 8-25% acrylamide Phast Gel, with a Phast System apparatus, and stained with 0.1% Coomassie blue.

Lane 1: CVF in reducing conditions (5% 2-mercaptoethanol); *lane 2*: mw standard (126, 102, 81, 53.5, 37, 31.4 kDa); *lane 3*: CVF in non reducing conditions.

A single electrophoretic band of 150 kDa mw was obtained, with a purity grade higher than 98%. In reducing conditions, CVF shows the typical 3 bands pattern, corresponding to α (69 kDa), β (45 kDa) and γ (29 kDa) subunits.



Biological activity

The anti-complementary activity was tested in a guinea pig red blood cells/serum system.

An absorbance of 1.0 was observed at 412 nm, with 1.96 µg of CVF in 1 ml of reaction mixture containing 1.5×10^6 /ml gpRBC. In the same system CVF resulted free from phospholipase contaminant. One milligram of CVF contains 400 units of activity.

Packages available

The protein is provided in 5 mM sodium phosphate, 140 mM sodium chloride, pH 7.2, as a sterile solution or as lyophilized powder to be reconstituted in 1 ml of distilled water per mg of powder. The product does not contain preservative.

Storage and stability

Store protein solution at -80°C and lyophilized powder at -20°C . Avoid freeze/thaw cycles. This product is stable for 2 years as supplied.

Type	Q.ty	CODE
Solution 1mg/ml (ml)	0.25	AC 04 025 01
	0.5	AC 04 050 01
	1.0	AC 04 100 01
Lyophilized powder (mg)	0.5	AC 04 050 02
	1.0	AC 04 100 02
	2.0	AC 04 200 02

Toxicity

R: 20/21/22; S:22
MSDS available upon request.

References

- SUN Qian-Yun, et al., 2001, Acta Biochimica et Biophysica Sinica, 33:483-488
Sharma S, et al., 2001, Acta Crystallogr. D Biol. Crystallogr.; 57:596-598
Vogel CW, et al., 1996, Adv. Exp. Med. Biol., 391:97-114.
Fritzinger DC et al., 1994, Proc. Natl. Acad. Sci. U.S.A., 91: 12775-12779.
(Erratum in: PNAS U S A., 1995, 92:7605).
Muller B, Muller-Ruchholtz W., 1987, Leuk. Res., 11:461-468
Beukelman CJ et al., 1987, J. Immunol. Methods, 91:119-122
Vogel CW, Müller-Eberhard HJ., 1984, J. Immunol. Methods, 73:203-220
Cochrane CG, Müller-Eberhard HJ, Aikin BS., 1970, J. Immunol., 105:55-69
Ballow M, Cochrane CG., 1969, J. Immunol., 103:944-952



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