

Cobra Venum Factor Anticomplementary Protein (CVF)

Certificate of Analysis and Data Sheet

➤ Source: Naja melanoleuca	➤ Catalog No. PRO-319
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➤ **Background:**

Cobra Venom Factor (CVF) is the complement-activating protein in cobra venom. Like C3b, CVF forms with factor B and factor D in human and mammalian serum the bimolecular C3/C5 convertase. This functional similarity of CVF and C3 correlates with many structural similarities, which led to the suggestion that CVF is evolutionally related to C3.

➤ **Description :**

Cobra Venom Anticomplementary Protein has a molecular weight of 150kd and is used for immuno-suppression, deplementing blood in vivo & in vitro, its dosage for mice is about 1µg per gram of body weight.
CVF is purified by Affinity Column chromatography

➤ **Physical Appearance:**

Sterile Filtered White lyophilized (freeze-dried) powder.

➤ **Solubility:**

It is recommended to reconstitute the lyophilized Cobra Venum Factor in sterile 18MΩ-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

➤ **Stability:**

Lyophilized CVF although stable at room temperature for 3 weeks, should be stored desiccated below -18 C. Upon reconstitution CVF should be stored at 4 C between 2-7 days and for future use below -18 C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Please avoid freeze-thaw cycles.

➤ **Purity:**

Greater than 90.0% as determined by:

(a) BCA protein assay.

(b) Polyacrylamide gel electrophoresis.

(c) SDS-PAGE Silver Stained gel showing the effect of pure CVF on the consumption of complement C3 in the blood of mice.

➤ **Dimers and aggregates:**

Less than 1% as determined by silver-stained SDS-PAGE gel analysis.

➤ **Biological Activity:**

Mice were given a single injection (IP) of pure Cobra Venom Factor (purified from the venom of *Naja melanoleuca* or *Naja kaouthia*, 25 ug/mice was injected). Blood sample was taken at the designated time intervals. SDS-PAGE immunoblot, using a C3 alpha chain specific antibody was used to demonstrate the consumption of C3 alpha chain in the blood. Both pure CVF from *N. kaouthia* and *N. melanoleuca* had the ability to activate the complement pathway, and to cause the depletion of complement in blood as is seen by the initial disappearance of the C3 alpha chain in the blood and the subsequent reappearance of newly synthesised C3 alpha chain.

➤ **Usage:**

This material is offered for research, laboratory or further evaluation purposes.