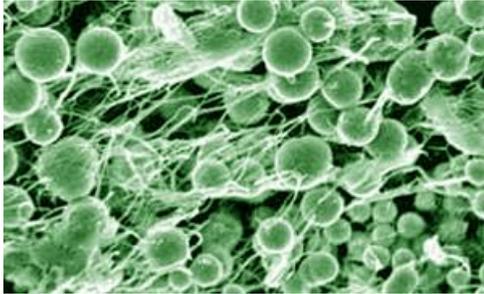


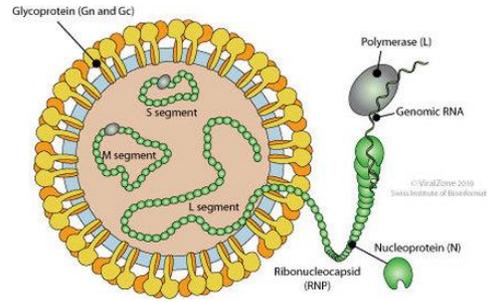
## Crimean-Congo Hemorrhagic Fever Virus (CCHFV) Vaccines ELISA Kits, Proteins and Antibodies

**Crimean-Congo hemorrhagic fever (CCHF)** is a widespread tick-borne viral disease, a zoonosis of domestic animals and wild animals, that may affect humans. The pathogenic virus, especially common in East and West Africa, is a member of the Bunyaviridae family of RNA viruses. Clinical disease is rare in infected mammals, but commonly severe in infected humans, with a 30% mortality rate. Outbreaks of illness are usually attributable to handling infected animals or people. Crimean-Congo hemorrhagic fever is found in Eastern Europe, particularly in the former Soviet Union. It is also distributed throughout the Mediterranean, in northwestern China, central Asia, southern Europe, Africa, the Middle East, and the Indian subcontinent.



The virus is a member of the genus *Nairovirus*, family *Bunyviridae*. The genome is circular, ambisense RNA in three parts - Small (S), Middle (M) and Large (L).

The L segment encodes the RNA polymerase; the M segment encodes the envelope proteins (Gc and Gn); and the S segment encodes the nucleocapsid protein. The envelope protein is initially translated as a glycoprotein precursor which is then cleaved into two smaller proteins. Based on the sequence data seven genotypes have been recognised: Africa 1 (Senegal), Africa 2 (Democratic Republic of the Congo and South Africa), Africa 3 (southern and western Africa), Europe 1 (Albania, Bulgaria, Kosovo, Russia and Turkey), Europe 2 (Greece), Asia 1 (the Middle East, Iran and Pakistan) and Asia 2 (China, Kazakhstan, Tajikistan and Uzbekistan).



Typically, after a 1–3 day incubation period following a tick bite (5–6 days after exposure to infected blood or tissues), flu-like symptoms appear, which may resolve

after one week. In up to 75% of cases, however, signs of hemorrhage appear within 3–5 days of the onset of illness in case of bad containment of the first symptoms: first mood instability, agitation, mental confusion and throat petechiae, then soon nosebleeds, bloody urine and vomiting, and black stools. The liver becomes swollen and painful. Disseminated intravascular coagulation may occur as well as acute kidney failure and shock, and sometimes acute respiratory distress syndrome. Patients usually begin to show signs of recovery after 9–10 days from when the symptoms appear, however 30% of the cases result in death on the second week of the illness. Treatment is primarily symptomatic and supportive, as there is no established specific treatment. Ribavirin is effective in vitro and has been used during outbreaks, but there is no trial evidence to support its use.

**Vaccines:** A Turkish research team led by Refik Saydam Health Institute has developed treatment-serum derived from blood of several CCHF-patients, which have been proven to be 90% effective in CCHF-patients. The vaccine is pending for approval by FDA.

**About ADI Congo Virus ELISA Kits:** ADI has cloned, expressed and purified CCHFV nucleoprotein that is being used as a candidate for newer subunit vaccine for Congo virus. ADI's Congo virus nucleoprotein antibody ELISA kit can be used to determine the level of antibodies during natural infection or in vaccinated individuals.

### CCHFV (Congo) Vaccine Related ELISA kits

(See Details at the website) [http://4adi.com/commerce/catalog/spcategory.jsp?category\\_id=2763](http://4adi.com/commerce/catalog/spcategory.jsp?category_id=2763)

| Items Description  | Species | Antibody Type IgG Cat# | Antibody Type IgM Cat# |
|--|---------|------------------------|------------------------|
| Congo Virus Vaccine Crimean-Congo hemorrhagic fever virus (CCHFV) nucleoprotein antibody ELISA Kit | Mouse   | AE-320400-1            | AE-320410-1            |
|  | Human   | AE-320420-1            | AE-320430-1            |
|  | Rabbit  | AE-320440-1            |                        |
|  | Bovine  | AE-320450-1            |                        |

| Item  | Catalog#     | Product Description  | Product Type    |
|---|--------------|--|-----------------|
| Crimean-Congo hemorrhagic fever virus proteins and antibodies | CCHFV11-C    | Recombinant (E. coli) Crimean-Congo hemorrhagic fever virus nucleoprotein protein (CCHFV, full length, his-tag, 55 kda) control for WB | Western control |
|   | CCHFV11-S    | Rabbit Anti-Crimean-Congo hemorrhagic fever virus nucleoprotein protein (CCHFV-NP, full length) antiserum                              | Antiserum       |
|   | CCHFV15-R-10 | Recombinant (E. coli) Crimean-Congo hemorrhagic fever virus nucleoprotein protein (full length, his-tag, 55 kda), purified             | Antigen protein |

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