

# Recombinant Yellow Fever Virus NS1 Protein, His-tagged

**Cat. No.** YEL-627    **Lot. No.** (See product label)

## SPECIFICATION

### Product Overview

Yellow Fever Virus NS1 protein is produced entirely from human cell lines using state-of-the-art expression techniques, the same approach which NAC used to develop its well received Dengue Virus NS1 serotypes and West Nile Virus NS1 protein. The Yellow Fever Virus NS1 protein is a native hexameric presentation. The hexamer is believed to be the biologically active form of NS1 involved in key aspects of yellow fever pathogenesis. The resultant Yellow Fever Virus NS1 protein is purified to a high degree, is in its native folding state, and possesses all post-translational modifications. This advanced approach results in a product which delivers optimal antigenicity due to its human origin. The Yellow Fever Virus NS1 protein has been manufactured in response to the unmet need for a highly purified, concentrated protein for use in further vaccine development and serological based diagnostic assays. The detection of the NS1 protein offers much higher fidelity across multiple flaviviruses where cross-reactivity can otherwise pose an issue.

### Tag

His

### Background

Yellow fever is an acute hemorrhagic disease caused by the Yellow Fever virus (YFV), which is a member of the Flaviviridae family of viruses. Clinical symptoms of YFV infection include fever, muscle pain, nausea and vomiting. In a small percentage of patients, the liver and kidneys are affected leading to jaundice, and in some cases death.

Yellow Ffever virus is endemic in tropical areas of Africa and Central/South America where the vector is widespread. In the virus's sylvatic cycle, it is transmitted to non-human primates via mosquitoes of the Haemagogus and Sabethes genera, with

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occasional outbreaks of Yellow Fever in individuals working in forest areas. In the virus's urban cycle, the *Aedes aegypti* mosquito is responsible for the transmission of Yellow Fever virus to humans in more populated areas.

In the late 1930's a safe and effective attenuated vaccine was developed against the YFV, which confers long-term immunity (Norrby, E). The virulent wild-type Asibi strain of YFV was used to develop the YFV 17D vaccine, which is effective in immunising individuals at risk of YFV infection (WHO).

Diagnosis of yellow fever is complicated by the fact that early symptoms of the infection can be confused with other haemorrhagic diseases including Dengue. Differential diagnosis is therefore an important consideration in areas where other flaviviruses such as Dengue and Zika co-circulate.

|                        |                                                                                                                                                                        |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>          | >95% pure by SDS-PAGE                                                                                                                                                  |
| <b>Sequence Strain</b> | 17D                                                                                                                                                                    |
| <b>Formulation</b>     | DPBS pH 7.4, 0.2µm filter sterilised.                                                                                                                                  |
| <b>Stability</b>       | At +4 centigrade: 1 week.<br>At <-20 centigrade:1 year.                                                                                                                |
| <b>Freezing</b>        | Can be frozen, but avoid multiple freeze/thaw cycles.                                                                                                                  |
| <b>Storage</b>         | Short Term Storage: +2 centigrade to +8 centigrade<br>Long Term Storage: -20 centigrade to -80 centigrade                                                              |
| <b>Concentration</b>   | 0.513 mg/mL                                                                                                                                                            |
| <b>Notes</b>           | This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of |

the material, including its disposal, in accordance with all regulations.

|      |             |
|------|-------------|
| Type | Recombinant |
|------|-------------|

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|-----------|--------------------|
| ClassID 1 | Infectious Disease |
|-----------|--------------------|

## GENE INFORMATION

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|----------|------------------------|
| Synonyms | Yellow Fever Virus NS1 |
|----------|------------------------|

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