



# DNA Aptamer Pair against Zika Virus Non-Structural Protein 1

SKU# APT-061: DNA Aptamer Pair against Zika Virus Non-Structural Protein 1

## Background

Zika virus is a member of the virus family *Flaviviridae*. It is spread by daytime-active *Aedes* mosquitoes, such as *A. aegypti* and *A. albopictus*. Zika virus shares a genus with the dengue, yellow fever, Japanese encephalitis, and West Nile viruses. Zika virus is enveloped and icosahedral and has a non-segmented, single-stranded, 10 kilobase, positive-sense RNA genome. The virus encodes three structural proteins (capsid, membrane and envelope glycoprotein). From these proteins, the envelope glycoprotein, or E protein, has an important role been associated with receptor binding, hemagglutination of erythrocytes, production of neutralizing antibodies and immune response.

In clinical setting, early diagnosis of Zika infection would be more effective to control epidemic and for timely treatment. A preferred option is to use serological methods for detecting Zika viral antigens (e.g., non-structure proteins). There are seven non-structural proteins (NS1, NS2A, NS2B, NS3, NS4A, NS4B and NS5), but only NS1 is continuously secreted in blood by the infected host cell, mainly in the first days of infection after the onset. NS1 is a glycoprotein with approximately 46–50 kDa, highly conserved among different serotypes.

Fusion BioLabs provides validated DNA aptamers against Zika virus non-structure protein (NS-1). They could be used as direct ELASA alone or paired to capture DNA aptamer and detection DNA aptamer for Sandwich ELASA.

**Aptamer type:** DNA aptamer

## Aptamer length & Affinity KD

	Aptamer Length	Affinity KD
Capture Aptamer	60 bp	24 pM
Detection Aptamer	60 bp	134 nM

## Kit contents

The following components are included in the Kit.

	Component	Quantity
APT-061-10	Single strand DNA, lyophilized powder	10 nmol
APT-061-30	Single strand DNA, lyophilized powder	30 nmol

- Store at -20°; reagents are guaranteed stable for 12 months when properly stored.