



FAPON  
BIOTECH

Co-Creator of Diagnostic Ecosystem

# Dengue NS1

✓ Specificity up to 99.8%

✓ High sensitivity

✓ Excellent stability

✓ High batch-to-batch consistency

The dengue virus belongs to the genus *Flavivirus* of the *Flaviviridae* family and is mainly transmitted by *Aedes aegypti*. The dengue virus includes four serotypes (types I–IV) and the infection by any serotype of the dengue virus can cause a series of clinical symptoms, manifested as invisible infection, fever, dengue fever or more severe dengue hemorrhagic fever and dengue shock syndrome.

NS1 is a non-structural glycoprotein of the dengue virus. Dengue virus NS1 protein can be detected in the serum of patients during the early stage of the dengue disease. The NS1 occurrence is earlier than the IgM antibody, hence the detection of NS1 antigen in the serum of acute phase patients can be used for the early diagnosis of dengue virus infection.

## Pairing Recommendation

Catalog No.	Host	Recommended Usage	Applicable Platform	
			Colloidal Gold	Immunofluorescence
BRCNS1S106	Monoclonal Antibody	Coating	√	--
BRCNS1S114	Recombinant Antibody	Coating		
BRJNS1S105	Recombinant Antibody	Labelling		

## Activity

Applied Fapon’s dengue virus I-IV as the QC material to test the activity performance between Fapon and Reference, Fapon Dengue showed an equivalent or a 0.5 higher color intensity to Reference.

QC Material	Reference Pair	Fapon Dengue Pair	QC Material	Reference Pair	Fapon Dengue Pair
DN-NS1-I	C3+	C 3	DN-NS1-III	C 7+	C 7+
DN-NS1-II	C 1	C 1	DN-NS1-IV	C 5	C 4+

## Positive Amplification

Fapon and Reference were used to test 24 positive samples respectively, Fapon Dengue showed a higher color intensity at 0.5 to Reference in 12 samples, and equivalent color intensity was showed in the other 12 samples between Fapon Dengue and Reference.

Sample No.	Reference Pair	Fapon Dengue Pair	Sample No.	Reference Pair	Fapon Dengue Pair
DN-01	C2	C2+	DN-13	C1-	C1-
DN-02	C2	C2	DN-14	C3	C3+
DN-03	C2	C2	DN-15	C2	C3+
DN-04	C2	C2+	DN-16	C3+	C3+
DN-05	C1	C1	DN-17	C2+	C2+
DN-06	C1	C1	DN-18	C2+	C2+
DN-07	C1	C1	DN-19	C2	C2
DN-08	C3+	C2	DN-20	C3	C3+
DN-09	C3	C3+	DNS-1	C3+	C2
DN-10	C3+	C2	DNS-4	C4	C4+
DN-11	C2+	C1	DNS-5	C3	C3+
DN-12	C2+	C2+	DNS-18	C4+	C3

# Specificity

1 out of 524 random clinical whole blood samples was found false positive result after testing with Fapon Dengue, 99.8% specificity and an equivalent level of color intensity to Reference were obtained.

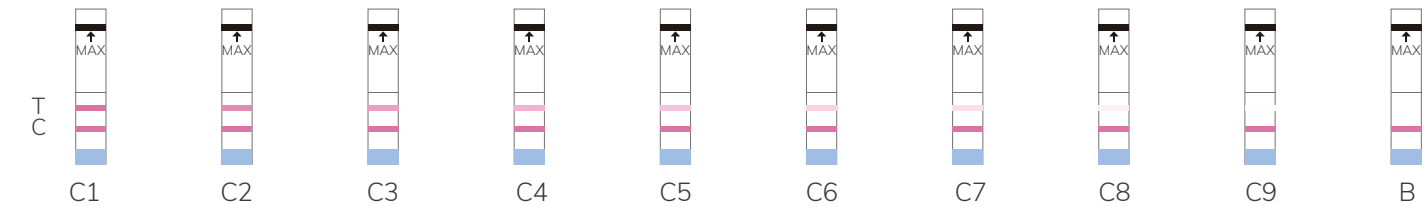
# Stability

Fapon Dengue showed little changes in activity and specificity levels in different temperature, storage periods, and condition of repeated freezing/thawing, confirming excellent product stability.

# Batch to Batch Consistency

Evaluated three batches of Fapon Dengue on the colloidal gold platform, results showed a small colour difference at 0.5 C, confirming small batch difference and high product stability can be achieved in production.

Temperature (C°)	Freeze-thaw Cycles (Times)	Duration (Days)
-80	--	21
-20	18	21
-4	--	21
Room Temperature	--	7/14/21
37	--	7/14/21
45	--	7



Note of the color intensity: the greater the number, the lower the activity.





**FAPON**  
BIOTECH

Enable Disease Identification Earlier,  
More Accurate, Convenient and Affordable

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