

Datasheet: PIP047A

BATCH NUMBER 173078

Description:	RECOMBINANT DENGUE VIRUS TYPE 1 NS1 ANTIGEN
Name:	DENGUE VIRUS TYPE 1 NS1 ANTIGEN
Other names:	DENV1 NS1 ANTIGEN
Format:	Rec. Protein
Product Type:	Recombinant Protein
Quantity:	100 µg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
ELISA	■			

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

Target Species	Viral
Product Form	Purified recombinant protein with a C-terminal 6 x His-tag - liquid
Preparation	Recombinant dengue virus serotype 1 NS1 protein, sequence strain Nauru/Western Pacific/1974, expressed in 293 human cells
Source	HEK-293
Buffer Solution	Dulbecco's phosphate buffered saline
Preservative Stabilisers	None present
Approx. Protein Concentrations	Current, batch-specific concentration 1.0 mg/ml

Specificity **Recombinant dengue virus type 1 NS1 antigen** is a purified preparation of the dengue virus serotype 1 (DENV1), non-structural protein 1 (NS1). DENV1 is one of four

(DENV1-4) antigenically distinct, closely related viral serotypes belonging to the *Flaviviridae* family, genus flavivirus. All four serotypes are known to cause viral infection in humans.

Dengue virus is common mosquito-borne infection and a major cause of morbidity in tropical and subtropical regions. There is currently no vaccine to prevent, or effective anti-viral drugs to treat, dengue virus infection. In many cases infection is asymptomatic and the majority of individuals who get ill only suffer the mild, non-specific febrile symptoms characteristic of dengue fever (DF). Only a minority of infections result in severe disease, manifesting as dengue hemorrhagic fever (DHF) or dengue shock syndrome (DSS). Dengue virus infection gives lifelong immunity to the serotype in question but subsequent infection with another serotype may increase the likelihood of severe disease.

The NS1 glycoprotein is essential for viral replication and viability, and since this protein is secreted into the bloodstream, tests have been developed to diagnose DENV infections using NS1, including antigen-capture ELISA, lateral flow antigen detection, and the measurement of NS1-specific IgM and IgG responses ([Guzman, M.G. et al. 2010](#)).

Recombinant DENV1 NS1 antigen is presented in its native folded state complete with post-translational modifications, delivering optimal antigenicity and making it suitable for use in vaccine research and serology-based assays.

Purity >95% by SDS PAGE analysis

Amino Acid Sequence aa772-1127 (Accession number P17763.2)

References

1. Rose, N. *et al.* (2016) Generation of monoclonal antibodies against native viral proteins using antigen-expressing mammalian cells for mouse immunization. [BMC Biotechnol. 16 \(1\): 83.](#)
2. Soe, H.J. *et al.* (2020) Correlation of host inflammatory cytokines and immune-related metabolites, but not viral NS1 protein, with disease severity of dengue virus infection. [PLoS One. 15 \(8\): e0237141.](#)

Further Reading

1. Guzman, M.G. *et al.* (2010) Dengue: a continuing global threat. [Nat Rev Microbiol. 8 \(12 Suppl\): S7-16.](#)

Storage

Store at -70°C.
Storage in frost-free freezers is not recommended.
This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the protein. Should this product contain a precipitate we recommend microcentrifugation before use.

Guarantee 12 months from date of despatch

Acknowledgements His-tag is a registered trademark of EMD Biosciences.

Health And Safety Material Safety Datasheet documentation #10209 available at:

Information <https://www.bio-rad-antibodies.com/SDS/PIP047A>

Regulatory For research purposes only

Product inquiries: www.bio-rad-antibodies.com/technical-support

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M431853:240821'

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