

Product Data Sheet

□ Cat # RP-1601

Recombinant Dengue Virus NS1, Type 1 protein, full length

Size: □ 50 ug

Dengue fever, also known as breakbone fever, is a mosquito-borne tropical disease caused by the dengue virus. Symptoms include fever, headache, muscle and joint pains, and a characteristic skin rash that is similar to measles. In a small proportion of cases the disease develops into the life-threatening dengue hemorrhagic fever, resulting in bleeding, low levels of blood platelets and blood plasma leakage, or into dengue shock syndrome, where dangerously low blood pressure occurs.

Dengue is caused by one of 5 closely related virus serotypes of the genus *Flavivirus*, family *Flaviviridae*, each serotype is sufficiently different that there is no cross-protection and epidemics caused by multiple serotypes (hyperendemicity) can occur. Dengue fever virus (**DENV**) is an RNA virus of the family *Flaviviridae*; genus *Flavivirus*. Other members of the same genus include yellow fever virus, West Nile virus, St. Louis encephalitis virus, Japanese encephalitis virus, tick-borne encephalitis virus, Kyasanur forest disease virus, and Omsk hemorrhagic fever virus. Most are transmitted by arthropods (mosquitoes or ticks), and are therefore also referred to as arboviruses (arthropod-borne viruses).

The dengue virus genome (11 kb), which code for the three different types of protein molecules (C, prM and E) that form the virus particle and seven other types of protein molecules (NS1, NS2a, NS2b, NS3, NS4a, NS4b, NS5) that are only found in infected host cells and are required for replication of the virus. There are five strains of the virus, called serotypes, of which the first four are referred to as **DENV-1, DENV-2, DENV-3 and DENV-4**. The fifth type was announced in 2013. The distinctions between the serotypes are based on their antigenicity. The diagnosis of dengue fever may be confirmed by microbiological laboratory testing. This can be done by virus isolation in cell cultures, nucleic acid detection by PCR, viral antigen detection (such as for NS1) or specific antibodies (serology). There are no approved vaccines for the dengue virus.

**Form, STORAGE & STABILITY:**

The insect cell derived recombinant protein contains the NS1 Dengue Virus full length Type-1 immunodominant regions (50 kDa). PBS, pH 7.4, 0.1 % Thimerosal, 5 mM EDTA, 1 µg/ml Leupeptin, Aprotinin, Pepstatin A (or see lot sp. conc on the vial).

Upon arrival, Store at -20°C. Five years frozen. One month in solution at room temperature. If supplied in powder then reconstitute it in 100ul water for 1 mg/mL stock and store in liquid at 4oC for ~ 1week or aliquots in suitable size and store at -20oC for long term storage..

**APPLICATION AND SUGGESTED DILUTIONS:**

Each laboratory should determine an optimum working titer for use in its particular application. Protein is >95% pure as determined by 12.5% PAGE. Users must optimize the appropriate concentration and conditions for each assay.

This item is for LABORATORY RESEARCH USE ONLY.

**References:** Rodenhuis-Zybert IA (2010) *Cell Mol. Life. Sci.* 67, 2773-2786; Wiwanitkit, V (2010) Expert review of anti-infective

therapy 8 (7): 841–5; Gubler DJ (1998) *Clin. Microbiol. Rev.* 11, 480-496; Villar L (2015) *NEJM* 372, 113-123

**Related Items**

Catalog#	ProdDescription
540-100-DHG	Human Anti-Dengue Virus IgG ELISA kits, 96 tests
540-110-DHM	Human Anti-Dengue Virus IgM ELISA kits, 96 tests
540-120-DHG	Mouse Anti-Dengue Virus IgG ELISA kit, 96 tests
540-130-DHM	Mouse Anti-Dengue Virus IgM ELISA kit, 96 tests
540-RTH-100	Human Anti-Dengue Virus (NS1) rapid test, 100/pk
AB-14310	Mouse Anti-Dengue Type 2 (envelop) IgG, aff pure
AB-21120	Anti-Dengue Type 1-4 viruses antiserum
AB-21121	Monoclonal Anti-Dengue Virus Type 1-4 (pan, E antigen) IgG, culture medium
AB-21122	Monoclonal Anti-Dengue Virus Type 1-4 (pan, NS1 glycoprotein), culture medium
AB-21123	Monoclonal Anti-Dengue Virus Type 2, NS1 glycoprotein
AB-22122	# change to AB-21122; Monoclonal Anti-Dengue Virus Type 1-4 (pan, NS1 glycoprotein), culture medium
RP-1594	Recombinant (E. coli) Dengue Virus Type 1 E Antigen (DENV E), antigen grade (>95% pure)
RP-1595	Recombinant (E. coli) Dengue Virus Type 2 E Antigen (DENV E), antigen grade (>95% pure)
RP-1596	Recombinant (E. coli) Dengue Virus Type 3 E Antigen (DENV E), antigen grade (>95% pure)
RP-1597	Recombinant (E. coli) Dengue Virus Type 4 E Antigen (DENV E), antigen grade (>95% pure)
RP-1598	Recombinant (E. coli) Dengue Virus Type 2 (and epitopes for type 1, 2, and 3) E Antigen (DENV E) (23 kda, >95% pure)
RP-1599	Recombinant (E. coli, his-tag) Dengue Virus NS1, Type 4 protein, full length
RP-1600	Recombinant (E. coli, his-tag) Dengue Virus NS1, Type 3 protein, full length
RP-1601	Recombinant (E. coli, his-tag) Dengue Virus NS1, Type 1 protein, full length
RP-1602	Recombinant (E.Coli) Dengue Virus Type 1+4, 2, and 3 envelop proteins antigen grade (>95% pure)
RP-1603	Recombinant (E.Coli) Dengue Virus Type 3 envelop protein (D-III), pure (>95%)
RP-1604	Recombinant (E.Coli) Dengue Virus Type 4 envelop protein (D-III), pure (>95%)
RP-1605	Recombinant (E.Coli) Dengue Virus Type 1 envelop protein (D-III), pure (>95%)
RP-1606	Recombinant (E.Coli) Dengue Virus Type 1-4 envelop+NS domains, pure (>95%)
RP-1607	Recombinant (E. coli, his-tag) Dengue Virus NS1 Type 2 immunodominant protein
RP-1608	Recombinant (E.Coli) Dengue Virus Type 1 N-terminus envelop immunodominant regions, pure (>95%)
RP-1620	Recombinant (E. coli, his-tag) Dengue Virus NS1, Type 2 protein
RP-344	Recombinant Dengue Virus NS3 Type 1 protein
RP-345	Recombinant (E.Coli) Dengue Virus NS1 c-end Type 2 protein
RP-346	Recombinant (E. coli, GST-tag) Dengue Virus NS1 n-end Type 2 protein
SP-100796-1	2A/2B Dengue Protease Substrate [Ac-Arg-Thr-Ser-Lys-Lys-Arg- pNA; MW: 937.08]
SP-100797-1	2B/3, Dengue Protease Substrate [Ac-Glu-Val-Lys-Lys-Gln-Arg- pNA; MW: 949.09]
SP-100800-1	3/4A, Dengue Protease Substrate [Ac-Phe-Ala-Ala-Gly-Arg-Lys- pNA; MW: 810.9]
RP-1601-Dengue-DENV-1-NS1-Protein.doc	150609A

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