ALPHA DIAGNOSTIC
INTERNATIONAL

Product Specification Sheet

□ **Cat**# RP-1643 Recombinant (E. coli) Dengue Virus Type 4 envelop protein (>95%, ~45 kda, his-tag) **SIZE**:50 ug

The dengue virus (DENV) is the cause of dengue fever. It is a mosquito-borne single positive-stranded RNA virus of the family Flaviviridae; genus Flavivirus. Five serotypes of the virus have been found, all of which can cause the full spectrum of disease. Nevertheless, scientists are finding their understanding of dengue virus may be simplistic, as rather than distinct antigenic groups there appears to be a continuum. This same study identified 47 strains of dengue virus. Additionally, coinfection with and lack of rapid tests for zika virus and chikungunya complicate matters in real world infections.

Its genome is about 11000 bases that codes for three structural proteins (capsid protein C, membrane protein M, envelope protein E) and seven nonstructural proteins (NS1, NS2a, NS2b, NS3, NS4a, NS4b, NS5). It also includes short non-coding regions on both the 5' and 3' ends.

Dengue fever is affected by 1 of 4 closely linked virus serotypes of the genus Flavivirus, family Flaviviridae. One might have dengue fever infected by the different serotype virus after the primary infection. Detection of particular antibodies to dengue viruses is used for the diagnosis in clinic. Recently, lateral flow rapid test products have become a most suitable and known method in the clinical diagnosis.

E protein

The DENV E (envelope) protein, found on the viral surface, is important in the initial attachment of the viral particle to the host cell. Dengue virus is transmitted by a mosquito known as Aedes. Several molecules which interact with the viral E protein (ICAM3-grabbing non-integrin, CD209, Rab 5, GRP 78 and the mannose receptor) have been shown to be important factors mediating attachment and viral entry.

Source of Antigen and Antibodies

Antigen	Recombinant Dengue Virus Subtype 4 Envelope 45kDa (a.a 43-413) is produced in E.coli. This protein is fused to a 6xHis tag at C-terminus. The protein is supplied in 25 mM arginine in PBS
Ab Host/type	Rabbit, Polyclonal Anti-Dengue Virus Type 3 Envelope protein antiserum (Cat# **DV4E62-S)**
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available)
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Suggested usage:

ELISA: coat at 0.2-5 ug/ml depending upon the application and sensitivity of the assay.

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.

Shipping: 4oC for solutions and room temp for powder.

General References: Normile, D; Science 2013 342 (6157): 415; Patil JA., Infection, Genetics and Evolution 2011. 11 (6): 1443–8; Halstead, SB, Science 1988, 239 (4839): 476–48.

**This product is for in vitro research use only.*

Related items

Catalog# Prod Description

AB-21122-1 Monoclonal Anti-Dengue Virus Type 1-4 (pan, NS1) IgG
AB-21122-2 Monoclonal Anti-Dengue Virus Type 1-4 (pan, NS1) IgG, clone 2 (pairs with clone 1)

AB-21123 Monoclonal Anti-Dengue Virus Type 2, NS1 IgG
AB-22122 # change to AB-21122; Monoclonal Anti-Dengue Virus Type 1-4 (pan, NS1 glycoprotein), culture medium

DV1NS12-M1 Monoclonal Anti-Dengue Virus Type 1 NS1 protein IgG, clone 1 (pairs with clone 2 in elisa or lateral flow)
DV1NS12-M2 Monoclonal Anti-Dengue Virus Type 1 NS1 protein IgG, clone 2 (pairs with clone 1 in elisa or lateral flow)

RP-1599 Recombinant (E. Coli, his-tag) Dengue Virus Type 4 NS1 protein, full length immunodominant regions (>95%, his-tag, ~45 kda)
RP-1600 Recombinant (E. Coli, his-tag) Dengue Virus Type 3 NS1 protein, full length immunodominant regions (>95%, his-tag, ~45 kda)

RP-1601 Recombinant (insect cells) Dengue Virus NS1 Type 1 protein, full length mmunodominant regions (>95%, his-tag, ~45 kda)
RP-1602 Recombinant (E.Coli) Dengue Virus Type 1 envelop (domain I + II) protein (>95%, his-tag, ~32 kda)

RP-1603 Recombinant (E.Coli) Dengue Virus Type 3 envelop protein (D-III) (>95%, ~15 kda, his-tag)
RP-1604 Recombinant (E.Coli) Dengue Virus Type 4 envelop protein (D-III) (>95%, ~15 kda, his-tag)

RP-1605 Recombinant (E.Coli) Dengue Virus Type 1 envelop protein (D-III) (>95%, ~15 kda, his-tag)

RP-1606 Recombinant (E.Coli) Dengue Virus Type 1+2+3+4 Envelop immunodominant regions (>95%, ~22 kda, his-tag)
RP-1607 Recombinant (E. Coli) Dengue Virus 2 NS1 full length immunodominant protein (>95%, ~45 kda, his-tag)

RP-1608 Recombinant (E.Coli) Dengue Virus Type 1 envelop N-terminus immunodominant regions (>95%, ~22 kda, his-tag)
RP-1620 Recombinant (E. coli) Dengue Virus Type 2 NS1 protein (>95%, his-tag)

RP-1639 Recombinant (E. coli) Dengue Virus Type 2 prm protein (>95%, 18

RP-1644 Recombinant (E.Coli) Dengue Virus Type 2 envelop (domain I + II) protein (>95%, his-tag, ~32 kda)
RP-1645 Recombinant (E.Coli) Dengue Virus Type 3 envelop (domain I + II) protein (>95%, his-tag, ~32 kda)

RP-1643-Dengue-type4-envelope 161219SV