

***Aedes aegypti*, Strain D2S3, Eggs**

Catalog No. NR-45838

For research use only. Not for human use.

Contributor:

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Manufacturer:

Centers for Disease Control and Prevention (CDC), Atlanta, Georgia, USA

Product Description:

Classification: *Culicidae*, *Aedes*

Species: *Aedes aegypti* (common name: yellow fever mosquito)

Strain: D2S3 (Dengue-2 susceptible on 3 chromosomes)

Original Source: *Aedes aegypti* (*A. aegypti*), strain D2S3 was derived from *A. aegypti*, strain PR (San Juan, Puerto Rico) crossed with *A. aegypti* subsp. *formosus*, strain Ibo (Ibo village, Nigeria) and screened for susceptibility to both midgut and disseminated dengue virus type 2 (DEN-2) infection.

Genotype: *A. aegypti*, strain D2S3 is Dengue-2 susceptible on 3 chromosomes (D2S3).¹

Phenotype: *A. aegypti*, strain D2S3 is susceptible to infection by DEN-2.¹⁻³

Transmission Competent Pathogens: DEN-2 and yellow fever virus

Material Provided:

NR-45838 contains a suitable number of live eggs to establish a stock. Eggs are provided on damp filter paper and should be hatched immediately upon receipt.

Packaging/Storage:

NR-45838 is prepared and shipped by CDC. The product is provided at room temperature.

Growth Conditions¹⁻³:

A. aegypti, strain D2S3 mosquitoes should be maintained in an insectary at approximately 27°C and 82% relative humidity under a 14-hour light:10-hour dark cycle (lights on at 8 a.m.). Eggs should be maintained at 27°C and 77%-82% relative humidity and hatched in deoxygenated, deionized water containing powdered Tetramin tropical fish food (Tetra, Melle, Germany). Larvae should be cultured in deionized water and fed Tetramin tablets. Adults are blood fed with citrated sheep's blood or fed on mice to induce egg production. For vector competency/infectivity studies with DEN-2, blood feed with DEN-2 grown in cell culture.

Citation:

Acknowledgment for publications should read "The following reagent was provided by Centers for Disease Control and Prevention for distribution by BEI Resources, NIAID, NIH: *Aedes aegypti*, Strain D2S3, Eggs, NR-45838."

Biosafety Level: 1

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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References:

1. Bennett, K. E., B. J. Beaty, and W. C. Black IV. "Selection of D2S3, an *Aedes aegypti* (Diptera: Culicidae) Strain with High Oral Susceptibility to Dengue 2 Virus and

- D2S3, a Strain with a Midgut Barrier to Dengue 2 Escape." J. Med. Entomol. 42 (2005): 110-119. PubMed: 15799518.
2. Bennett, K. E., et al. "Quantitative Trait Loci That Control Dengue-2 Virus Dissemination in the Mosquito *Aedes aegypti*." Genetics 170 (2005): 185-194. PubMed: 15781707.
 3. Black IV, W. C., Personal Communication.

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