

Total Nucleic Acids from Adult Male *Simulium vittatum*, Cytospecies IS-7

Catalog No. NR-55428
Lot: 70043669

For research use only. Not for use in humans.

Contributor and Manufacturer:

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Product Description:

NR-55428 is a preparation of total nucleic acids extracted from uninfected, adult male *Simulium vittatum* (*S. vittatum*), cytospecies IS-7. *S. vittatum*, cytospecies IS-7 was collected from Flaxmill Brook in Cambridge, New York by C. A. Tarrant in September of 1981.¹ This species is a competent vector (biological and mechanical) of vesicular stomatitis New Jersey virus (VSNJV).²

S. vittatum are scattered across North America and the Atlantic islands, including Newfoundland and Prince Edward Island. The species *vittatum* is divided into two cytospecies, ILL-1, found primarily in the southern United States, and IS-7 (also known as *S. vittatum sensu stricto*), found primarily in the northern United States and Canada.^{3,4} *S. vittatum* is the vector for the transmission of VSNJV, the causative agent of vesicular stomatitis in ungulate species such as cows, horses and swine. Vesicular stomatitis is characterized by fever and vesicles in the oral cavity and on the muzzle, snout, lips, coronary bands of feet, teats and prepuce.⁵ *S. vittatum* has also been shown to transmit the parasitic nematode species *Onchocerca* under laboratory conditions.³

Material Provided:

Each vial of NR-55428 contains approximately 60 µL of total nucleic acids in 10 mM Tris-HCl, 0.5 mM EDTA, pH 9.0. Concentration should be determined prior to beginning work.

Packaging/Storage:

NR-55428 was packaged aseptically in screw-capped plastic vials. The product is provided frozen and should be stored at -20°C or colder upon arrival. Freeze-thaw cycles should be minimized.

Citation:

Acknowledgment for publications should read "The *Simulium vittatum* cytospecies used in this work were produced with the support of NIH Task Order C-08, Contract No. HHSN2722017000351, Task Order No. 75N93020F00002 and obtained through BEI Resources, NIAID, NIH: Total Nucleic Acids from Adult Male *Simulium vittatum*, Cytospecies IS-7, NR-55428."

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. 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see www.cdc.gov/biosafety/publications/bmb15/index.htm.

Disclaimers:

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References:

1. Gray, E. W., Personal Communication.
2. Reis, J. L., Jr, et al. "Lesion Development and Replication Kinetics During Early Infection in Cattle Inoculated with Vesicular Stomatitis New Jersey Virus via Scarification and Black Fly (*Simulium vittatum*) Bite." Vet. Pathol. 48 (2011): 547-557. PubMed: 20858740.
3. Gaudreau, C., B. LaRue and G. Charpentier. "Molecular Comparison of Quebec and Newfoundland Populations of the Blackfly, *Simulium vittatum*, Species Complex." Med. Vet. Entomol. 24 (2010): 214-217. PubMed: 20604865.

4. Adler, P. H., D. C. Currie and D. M. Wood. The Blackflies (Simuliidae) of North America. (2004) New York, New York: ROM Publication in Sciences.
5. Gray, E. W. and R. Noblet. "Black Fly Rearing and Use in Laboratory Information: Bioassays." Rearing Animal and Plant Pathogen Vectors. (2014) Maramorosch K. and F. Mahmood (Eds.) Boca Raton: CRC Press.
6. Bernardo, M. J., E. W. Cupp and A. E. Kiszewski. "Rearing Black Flies (Diptera: Simuliidae) in the Laboratory: Colonization and Life Table Statistics for *Simulium vittatum*." Ann. Entomol. Soc. Am. 79 (1986): 610-621. PubMed: 3795237.

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