

***Simulium vittatum*, Cytospecies IS-7, Preserved Adults**

Catalog No. NR-53897

For research use only. Not for use in humans.

Contributor and Manufacturer:

Darold P. Batzer, Professor, and Elmer W. Gray, Assistant Project Director, Black Fly Research and Resources Center (BFR2), Department of Entomology, The University of Georgia, Athens, Georgia, USA

Product Description:

Classification: Simuliidae, *Simulium*

Species: *Simulium vittatum* sensu stricto (common name: black fly)

Cytospecies: IS-7

Original Source: *Simulium vittatum* (*S. vittatum*), cytospecies IS-7 was collected from Flaxmill Brook in Cambridge, New York by C. A. Tarrant in September of 1981.¹

Comments: This species is a competent vector (biological and mechanical) of vesicular stomatitis New Jersey virus (VSNJV).²

S. vittatum complex is distributed across North America. This species complex consists of two species: *S. tribulatum* (also known as cytospecies IIL-1), found throughout the continent, and *S. vittatum* sensu stricto (also known as cytospecies IS-7), found primarily in the northern and western United States and Canada.³ *S. vittatum* is the vector for VSNJV, the causative agent of vesicular stomatitis in ungulates such as cows, horses and swine. Vesicular stomatitis is characterized by fever and vesicles in the oral cavity and on the muzzle, snout, lips and coronary bands of feet, teats and prepuce.² *S. vittatum* also transmits the parasitic nematode *Onchocerca* under laboratory conditions.⁴

Material Provided:

Each vial of NR-53897 contains approximately 150 preserved, mixed sex adults in 80% ethanol. Note: Preserved *S. vittatum* can also be obtained in egg (NR-53894), larval (NR-53895) or pupal stages (NR-53896).

Packaging/Storage:

NR-53897 is prepared and shipped by the University of Georgia [Black Fly Research and Resource Center](#). Upon arrival, the adults should be stored at 20°C to 22°C in the dark.

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: *Simulium vittatum*, Cytospecies IS-7, Preserved Adults, NR-53897."

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/bmbl5/index.htm.

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References:

1. Brockhouse, C. L. and P. H. Adler. "Cytogenetics of Laboratory Colonies of *Simulium vittatum* Cytospecies IS-7 (Diptera: Simuliidae)." *J. Med. Entomol.* 39 (2002): 293-297. PubMed: 11931029.
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. 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.
4. Lehmann, T., M. S. Cupp and E. W. Cupp. "Analysis of Migration Success of *Onchocerca lienalis* Microfilariae in the Haemocoel of *Simulium vittatum*." J. Helminthol. 69 (1995): 47-52. PubMed: 7622790.
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.

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