

**Bat SARS-Like Coronavirus, Recombinant, Containing the SARS Coronavirus Urbani Strain Spike Glycoprotein Receptor-Binding Domain**

**Catalog No. NR-44009**

**For research use only. Not for human use.**

**Contributor:**

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**Manufacturer:**

BEI Resources

**Product Description:**

Virus Classification: *Nodovirales, Coronaviridae, Coronavirinae, Betacoronavirus*

Agent: Bat severe acute respiratory syndrome (SARS)-like coronavirus (CoV)

Strain/Isolate: Synthetic recombinant bat SARS-CoV containing the spike glycoprotein receptor-binding domain of the SARS-CoV Urbani strain (Bat-SRBD)<sup>1</sup>

Comments: The complete genome of bat SARS-CoV has been sequenced (GenBank: FJ211859), as has the spike glycoprotein gene of recombinant bat-SRBD (GenBank: FJ211860).<sup>1,2</sup>

NR-44009 is a synthetic chimeric recombinant coronavirus based on a consensus bat SARS-like coronavirus (SCoV) sequence. The bat SCoV receptor-binding domain (RBD) of the spike glycoprotein (amino acids 323-505) was replaced with the SARS-CoV, Urbani RBD (amino acids 319-518), simulating a theoretical recombination event that might occur during mixed infection *in vivo*.<sup>1</sup> Following electroporation and serial passage, progeny virions were produced with a population genome sequence identical to that of the molecular clone. The bat-SRBD virus replicates efficiently in primate and murine cells, and also replicates in mouse lungs.

**Material Provided:**

Each vial contains approximately 1 mL of cell lysate and supernatant from Vero E6 (C1008) cells (ATCC® CRL-1586™) infected with bat-SRBD.

**Packaging/Storage:**

NR-44009 was packaged aseptically, in screw-capped plastic cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

**Citation:**

Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: Bat SARS-Like Coronavirus, Recombinant, Containing the SARS Coronavirus Urbani Strain Spike Glycoprotein Receptor-Binding Domain, NR-44009.”

**Biosafety Level: 3**

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](http://www.cdc.gov/biosafety/publications/bmbl5/index.htm).

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NR-44009 is claimed in U.S. Patent Number 7,618,802 and the continuations, continuations-in-part, re-issues and foreign

counterparts thereof. Commercial use may require a license from the University of North Carolina at Chapel Hill. For further information contact the Office of Technology Development, Campus Box 4105, 308 Bynum Hall, The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, 27599-4105, (919) 966-3929.

**References:**

1. Becker, M. M., et al. "Synthetic Recombinant Bat SARS-Like Coronavirus is Infectious in Cultured Cells and in Mice." Proc. Natl. Acad. Sci. U S A. 105 (2008): 19944-19949. PubMed: 19036930.
2. Becker, M. M., et al. University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA, Direct Submission.

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