

Peptide Array, Zika Virus, PRVABC59 Envelope Protein Diverse Peptides

Catalog No. NR-50554

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Contributor:

BEI Resources

Manufacturer:

Bio-Synthesis, Inc.

Product Description:

NR-50554 is a 5-peptide array that represents a region of amino acid sequence diversity in the envelope (E) protein of the PRVABC59 strain of Zika virus (ZIKV). Peptides are 15-mers, with 12 amino acid overlaps. The CDC sequence for ZIKV, PRVABC59 (GenPept: AMC13911)¹ is identical to that of BEI Resources NR-50240 (GenPept: AMZ03556)², with the exception of one amino acid, V620L (aa330 of the E protein). A peptide array covering the entire E protein of the CDC sequence (GenPept: AMC13911) can be constructed using these 5 peptides and peptides from BEI Resources NR-50553 (Peptide Array, Zika Virus, PRVABC59 Envelope Protein).

Material Provided:

Peptides are provided lyophilized at 1 mg per vial.

Packaging/Storage:

Lyophilized peptides should be placed in a closed dry environment with desiccants and stored at -20°C or colder immediately upon arrival. A frost-free freezer should be avoided, since changes in moisture and temperature may affect peptide stability.

Solubility:

Solubility may vary based on the amino acid content of the individual peptide (see Certificate of Analysis).

Reconstitution:

Lyophilized peptides should be warmed to room temperature for 1 hour prior to reconstitution. They should be dissolved at the highest possible concentration, and then diluted with water or buffer to the working concentration. Buffer should be added only after the peptide is completely in solution because salts may cause aggregation.

The most common dissolution process is 1 mg of peptide in 1 mL of sterile, distilled water. Peptides that are not soluble in water can almost always be dissolved in DMSO. Once a peptide is in solution, the DMSO can be slowly diluted with aqueous medium. Care must be taken to ensure that the peptide does not begin to precipitate out of solution. For cell-based assays, 0.5% DMSO in medium is usually well-tolerated.

Sonication and/or the addition of small amounts of dilute (10%) aqueous acetic acid for basic peptides, aqueous ammonia for acidic peptides or acetonitrile may also help dissolution (see Certificate of Analysis). These solvents may not be appropriate for certain applications, including cell-based assays.

Storage of Reconstituted Peptides:

The shelf life of peptides in solution is very limited, especially for sequences containing cysteine, methionine, tryptophan, asparagine, glutamine, and N-terminal glutamic acid. In general, peptides may be aliquoted and stored in solution for a few days at -20°C or colder. For long-term storage, peptides should be re-lyophilized and stored at -20°C or colder. If long-term storage in solution is unavoidable, peptide solutions should be buffered to pH 5-6, aliquoted and stored at -20°C or colder. Freeze-thaw cycles should be avoided.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Peptide Array, Zika Virus, PRVABC59 Envelope Protein Diverse Peptides, NR-50554."

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/bmb15/index.htm.

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References:

1. Lanciotti, R. S., and M. Holodniy. Diagnostic and Reference Laboratory, Arbovirus Diseases Branch, Centers for Disease Control and Prevention, 3150 Rampart Road, Fort Collins, Colorado 80521, USA. Direct submission.
2. Shabman, R., et al. J. Craig Venter Institute, 9704 Medical Center Drive, Rockville, Maryland 20850, USA. Direct submission.

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