Antiviral Compound UV-4B (API, EV016Q, cGMP)

Catalog No. NR-51350

For research use only. Not for human use.

Contributor and Manufacturer:
Emergent BioSolutions Inc., Gaithersburg, Maryland, USA

Product Description:
UV-4B, a hydrochloride salt of an iminosugar analog UV-4, inhibits activity of host endoplasmic reticulum α-glucosidases I and II, thus causing misfolding of viral glycoproteins leading to the reduction of infectious progeny viruses.[1] The host based mechanism of action of UV-4B allows for its broad spectrum use with reduced chances of selecting drug resistant viruses. UV-4B inhibits all four serotypes of dengue virus and influenza A and B viruses.[2-4]

Material Provided:
Each vial contains 500 mg of UV-4B. Reconstituted material should be filter-sterilized prior to use.

Packaging/Storage:
NR-51350 was packaged in glass serum vials and is provided on refrigerated bricks. NR-51350 should be stored at 2°C to 8°C immediately upon arrival. The vial should be centrifuged prior to opening.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Antiviral Compound UV-4B (API, EV016Q, cGMP), NR-51350."

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.

Disclaimers:
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References:
1. Perry, S. T., et al. "An Iminosugar with Potent Inhibition of Dengue Virus Infection *in vivo*." Antiviral Res. 98 (2013): 35-43. PubMed: 23376501.
2. Warfield, K. L., et al. "Inhibition of Endoplasmic Reticulum Glucosidases is Required for *in vitro* and *in vivo* Dengue Antiviral Activity by the Iminosugar UV-4." Antiviral Res. 129 (2016): 93-98. PubMed: 26946111.
3. Warfield, K. L., et al. "The Iminosugar UV-4 is a Broad Inhibitor of Influenza A and B Viruses *ex vivo* and in Mice." Viruses 8 (2016): 71. PubMed: 27072420.
4. Stavale, E. J., et al. "*In vivo* Therapeutic Protection against Influenza A (H1N1) Oseltamivir-Sensitive and Resistant Viruses by the Iminosugar UV-4." PLoS One 10 (2015): e0121662. PubMed: 25786028.
5. Plummer, E., et al. "Dengue Virus Evolution under a Host-Targeted Antiviral." J. Virol. 89 (2015): 5592-5601. PubMed: 25762732.

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