

**Protein A29 from Monkeypox Virus with C-Terminal Histidine Tag, Recombinant from *Escherichia coli***

**Catalog No. NR-58633**

**Sino Biological Catalog No. 40891-V08E**

**For research use only. Not for use in humans.**

**Contributor and Manufacturer:**

Sino Biological, Wayne, Pennsylvania, USA

**Product Description:**

A recombinant form of protein A29 from monkeypox virus (MPXV) was expressed in *Escherichia coli* and purified using tag-based affinity purification.<sup>1</sup> NR-58633 lacks the signal sequence, contains 90 residues of the MPXV A29 protein and features a C-terminal hexa-histidine tag.<sup>1</sup> The predicted protein sequence is shown in Figure 1. NR-58633 has a theoretical molecular weight of approximately 11,360 daltons. Representative SDS-PAGE results are shown in Figure 2.<sup>1</sup>

MPXV protein A29 is a homolog of the vaccinia virus A27 protein. Multiple functions of the A27 protein: 1) binds heparin on the cell surface to mediate cell fusion; 2) required for intracellular mature virions (IMV) trafficking on microtubules and intracellular enveloped virus (IEV) formation; 3) anchor for packaging the A26 protein into mature viral particles; 4) key target for neutralizing antibody.<sup>1</sup>

**Material Provided:**

Each vial contains approximately 50 µg of purified recombinant protein lyophilized from phosphate-buffered saline, pH 7.4 containing 5% trehalose, 5% mannitol and 0.01% Tween-80.

**Packaging/Storage:**

NR-58633 was packaged aseptically in cryovials. The product is provided at ambient temperature and should be stored under sterile conditions at -20°C to -80°C immediately upon arrival. NR-58633 is stable for twelve months at -20°C to -80°C. It is recommended that the protein be aliquoted for optimal storage.<sup>1</sup> Freeze-thaw cycles should be avoided.

**Reconstitution:**

NR-58633 should be reconstituted with 200 µL sterile deionized water to a stock solution of 0.25 mg per mL.<sup>1</sup> Add water with occasional gentle mixing. Note: Avoid vigorous shaking or vortexing.

**Storage of Reconstituted Protein:**

Reconstituted NR-58633 should be stored at -80°C or colder immediately. Avoid repeated freeze-thaw cycles.

**Functional Activity:**

NR-58633 reacts with monoclonal anti-MPXV A29 antibodies (Sino Biological 40891-M0006, 40891-M0025 and 40891-M0036) in western blot analysis.<sup>1</sup>

**Citation:**

Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: Protein A29 from Monkeypox Virus with C-Terminal Histidine Tag, Recombinant from *Escherichia coli*, NR-58633.”

**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](http://www.cdc.gov/biosafety/publications/bmb15/index.htm).

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**References:**

1. Lu, Z., Personal Communication.

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**Figure 1: Predicted Protein Sequence**

1 **MSTKAAKNPE TKREAIVKAY GDDNEETLKQ RLTNLEKKIT NITTKFEQIE**  
 51 **KCCKRNDEVL FRLNHAETL RAAMISLAKK IDVQTGRHPY EHHHHHHH**

A29 protein – **Residues 2 to 91** (represents amino acid residues 21 to 110)

Hexa-histidine tag – Residues 92 to 97

**Figure 2: Representative SDS-PAGE**

