

**Protein A33 from Monkeypox Virus with N-Terminal Histidine and GST tags, Recombinant from *Escherichia coli***

**Catalog No. NR-58635**

**Sino Biological Catalog No. 40885-V53E**

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

**Contributor and Manufacturer:**

Sino Biological, Wayne, Pennsylvania, USA

**Product Description:**

A recombinant form of protein A33 from monkeypox virus (MPXV) was expressed in *Escherichia coli* and purified by affinity tag and size exclusion chromatography.<sup>1</sup> NR-58635 contains the full-length MPXV A33 protein and features a hexa-histidine tag, glutathione S-transferase (GST) tag and an HRV3C protease cleavage site at the N-terminus.<sup>1</sup> The predicted protein sequence is shown in Figure 1. NR-58635 has a theoretical molecular weight of approximately 44.07 kDa. Representative SDS-PAGE results are shown in Figure 2.<sup>1</sup>

**Material Provided:**

Each vial contains approximately 50 µg of purified recombinant protein lyophilized from sterile 50mM Tris with 150 mM saline, 2mM EDTA, 7.5% trehalose, 7.5% mannitol and 10% glycerol.

**Packaging/Storage:**

NR-58635 was packaged aseptically in glass vials. The product is provided at ambient temperature and should be stored under sterile conditions at -20°C immediately upon arrival. NR-58635 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> Reconstituted NR-58635 should be stored at -80°C or colder immediately. Freeze-thaw cycles should be avoided.

**Reconstitution:**

NR-58635 should be reconstituted with 500 µL sterile deionized water to a stock solution of 0.1mg/mL.<sup>1</sup> Add water with occasional gentle mixing. Note: Avoid vigorous shaking or vortexing.

**Citation:**

Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: Protein A33 from Monkeypox Virus with N-Terminal Histidine and GST tags, Recombinant from *Escherichia coli*, NR-58635.”

**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 \(BMBL\)](#). 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

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**References:**

1. Lei, C., Personal Communication.

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Figure 1: Predicted Protein Sequence

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1  MHHHHHHSPI LGYWKIKGLV QPTRLLLEYL EEKYEEHLYE RDEGDKWRNK
51  KFELGLEFPN LPYYIDGDVK LTQSMAIIRY IADKHNMLGG CPKERAEISM
101 LEGAVLDIRY GVSRIAYSKD FETLKVDFLS KLPEMLKMF E DRLCHKTYLN
151 GDHVTHPDFM LYDALDVVLY MDPMCLDAFP KLVCFKKRIE AIPQIDKYLK
201 SSKYIAWPLQ GWQATFGGGD HPPKSLEVL F QGPTSILNTL RFLEKTSFYN
251 CNDSITKEKI KIKHKGMLFV FYKPKHSTVV KYLSGGGIYH DDLVVLGKVT
301 INDLKMMLEFY MDLSYHGVTS SGAIYKLGSS IDRLSLNRTI VTKVNNNYNN
351 YNNYNNYNCY NNYNCYNYDD TFFDDDD
    
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Hexa-histidine tag – Residues 2 to 7

GST tag – Residues 1, 8 to 225

HRV3C protease – Residues 226 to 233

**MPXV A33 protein – Residues 234 to 377** (represents amino acid residues 1 to 144 of the native MPXV A33)

Figure 2: Representative SDS-PAGE



Lane 1: MW ladder

Lane 2: NR-58635