

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived monkeypox virus zaire-96-i-16 A30L protein Gln22-Leu146, with a C-terminal 6-His tag Accession # NP_536567.1
N-terminal Sequence Analysis	Gln22 inferred from enzymatic pyroglutamate treatment revealing Ser23
Predicted Molecular Mass	15 kDa

SPECIFICATIONS

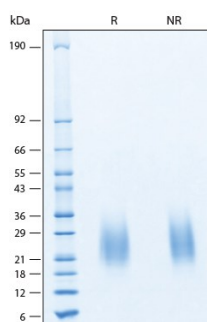
SDS-PAGE	22-26 kDa, under reducing conditions.
Activity	Bioassay data are not available.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

SDS-PAGE



Recombinant Monkeypox Virus A30L His-tag Protein SDS-PAGE. 2 µg/lane of Recombinant Monkeypox Virus A30L His-tag Protein (Catalog # 11282-MX) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 22-26 kDa.

BACKGROUND

Monkeypox Virus (MPXV), the virus that causes monkeypox infection in both humans and animals, is a double-stranded DNA virus that has had a recent global outbreak in 2022 (1). MPXV belongs to the Poxviridae family of viruses (2). It consists of several key subunits including a surface membrane fusion protein (A29L, ~14 kDa), two separate envelope proteins (A30L ~14 kDa and H3L ~32 kDa), an envelope glycoprotein, A35R ~15 kDa, a receptor glycoprotein that mimics IFN-alpha/beta (B16, ~37 kDa), a palmitoylated EEV membrane glycoprotein (C19L, ~35 kDa), a secreted IL-18 binding protein (D6L, ~14 kDa), a cell surface-binding protein (E8L, ~32 kDa), a telomere binding protein (I1L, ~36 kDa), and a subunit required for DNA packaging (L1R, 18 kDa) (2, 3). The A30L subunit is 146 amino acids long and one of the two envelope proteins responsible for allowing for viral entry into a host cell and starting cell to cell fusion (4). The A30L subunit has been the focus of multiple studies for vaccination purposes for not only monkeypox, but for smallpox as well (4). The A30L subunit has also been looked into for development in detection kits for MPXV (5).

References:

1. Breman, J.G. *et al.* (1980) Bull World Health Organ. **58**:165.
2. Farahat, R.A. *et al.* (2022) Infez Med. **30**:372.
3. Schelkunov, S.N. *et al.* (2002) Virology **297**:172.
4. Rinat, A.M. *et al.* (2013) Journal of Vaccines <http://dx.doi.org/10.1155/2013/618324>.
5. Dumont, C. *et al.* (2014) PLOS One **9**:e96930.