Anti-Vaccinia virus L1 protein (cross-reacts with Monkeypox virus), mouse monoclonal antibody (NP2)

65-038　50 μg

Shipping and Storage: Shipped at 4℃ or -20℃ and store at -20℃.

Immunogen: Lysate of Vaccinia virus-infected cells

Form: 1mg/ml in PBS- with 50% glycerol. Filter-sterilized.

Purity: Protein A purified IgG1 κ

Reactivity: Nucleoprotein (L1) of Vaccinia virus, Monkeypox virus, Cowpox virus and Ectromelia virus

Applications:

Western blotting: x1/400-800 (Fig.1)

Immunofluorescence: x1/400 (Fig.2)

Background: Variola virus (VAV), vaccinia virus (VV), cowpox virus (CPV) and Monkeypox (MPV) belong to the genus Orthopoxvirus of the family Poxviridae. The VAV and MPV cause serious, contagious, and sometimes fatal disease. Therefore, confirmation of these outbreaks requires rapid and reliable detection and diagnosis.

Several major antigens have been shown to be induced in cells infected with poxviruses, i.e., the nucleoprotein (NP) antigen, neutralization (NT)-associated antigen. The NP (also called L1 or L1R) is a so-called common antigen that shows cross-reactivity with cells infected with almost all poxviruses. The L1 protein, a component of the mature virion membrane, is required for virus entry into host cells and is a target for neutralizing antibody. The L1 is a 250-amino-acid polypeptide (with molecular weight of 28kDa). Although L1 has a C-terminal hydrophobic segment embedded in the viral membrane, the 185-residue (22kDa), disulfide-bonded ectodomain is located in the cytoplasm before lysis of the host cell.

Data Link: UniProKB: Q71TT2__9POXV

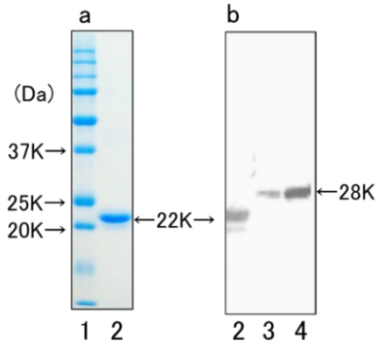

Fig.1. SDS-PAGE (a) of the recombinant VV L1 protein and Western blot (b) using NP2 antibody.
The recombinant VV L1 protein (185-residues, 22kDa) and the lysates of VV- or CPV-infected RK13 cells were applied to SDS-PAGE. (1) Marker, (2) recombinant L1 protein, (3) NP40 lysate of VV Lister strain-, (4) NP40 lysate of CPV LB strain-infected RK13 cells. The NP2 antibody was used at 1/400 dilution. The HRP-conjugated goat anti-mouse IgG (abcom) was used at 1/3,000 as the second antibody. A 28kDa band was identified as VV L1 protein.

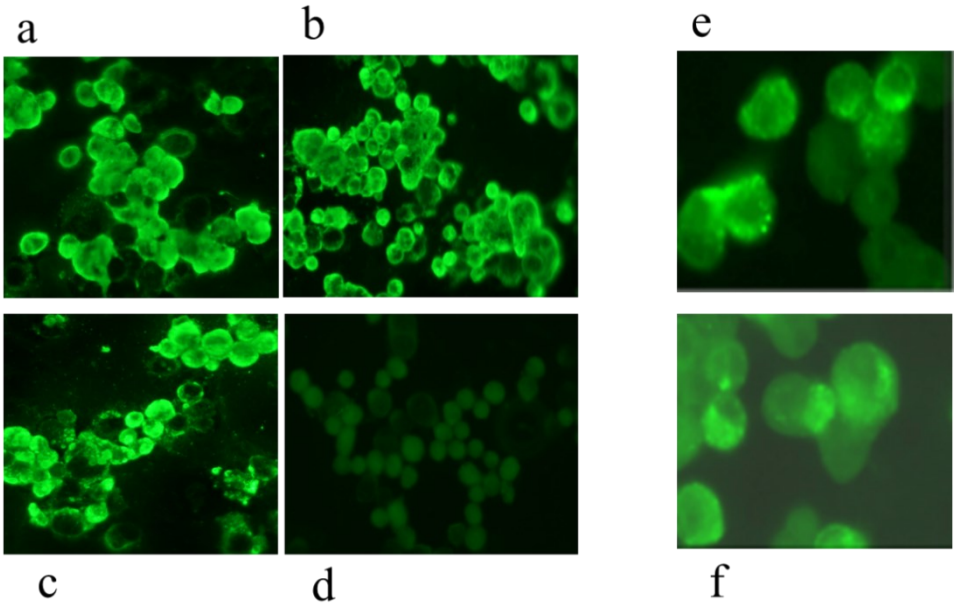

Fig.2. Immunofluorescence staining of VV-, CPV-, and MPV-infected cells.
Virus-infected and uninfected cells on a slide glass were fixed with aceton. (a) VV Lister strain-, (b) VV Ikeda strain-, (c) CPV LB strain-, (d) uninfected-RK13 cells, and (e) MPV r599 strain-, (f) MPV Liberia strain-infected Vero E6 cells. The NP2 antibidy was used at 1/400 dilution. The FITC-conjugated goat anti-mouse IgG (abcom) was used at 1/3,000 as the second antibidy.

Reference: This antibody has not yet been used in publication.
Related products: #65-039 Anti-Vaccinia virus L1 protein (neutralization), mouse monoclonal (NP3)