Anti-Vaccinia virus L1 (neutralization), mouse monoclonal antibody (NP3)

65-039　50 μg

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

Immunogen: Recombinant Vaccinia virus nucleoprotein (L1) expressed in *E. coli*.

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

Purity: Protein A purified IgG1 κ

Reactivity: Nucleoprotein (L1 protein) of vaccinia virus and cowpox 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.

It has been shown that several major antigens are induced in cells infected with poxviruses, i.e., the nucleoprotein (NP) antigen, neutralization (NT)-associated antigen. The NP (also called L1 or L1R protein) is a so-called common antigen, as shown by 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

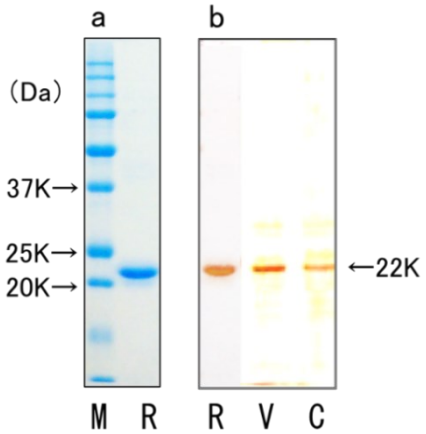

Fig.1. SDS-PAGE (a) of the recombinant VV L1 protein and Western blot (b) using NP3 antibody.
The recombinant VV L1 protein (185 residues, 22kDa) and the lysates of virus-infected RK13 cells were applied to SDS-PAGE. (M) Marker, (R) recombinant L1 protein, (V) VV Lister strain, (C) CPV LB red strain. The NP3 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.

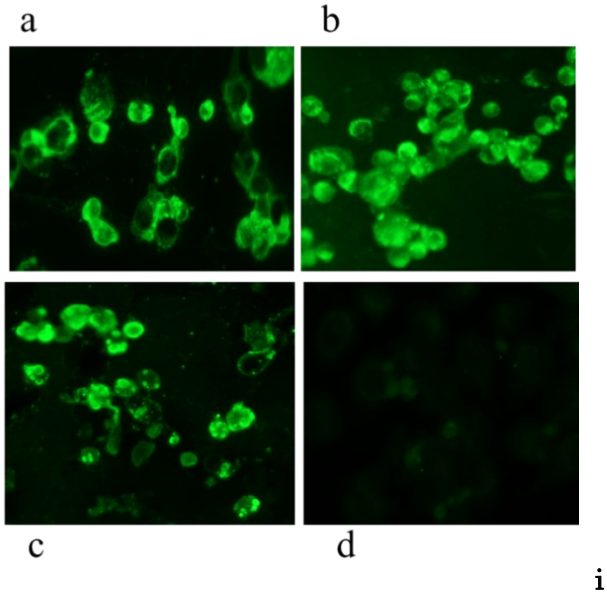

Fig.2. Immunofluorescence staining of VV- or CPV- infected RK13 cells. Virus-infected and uninfected RK13 cells on a slide glass were fixed with ethanol. (a) VV Lister strain, (b) VV Ikeda strain, (c) CPV LB red strain and (d) uninfected RK13 cells. The NP3 antibidy was used at 1/400 dilution. The FITC-conjugated goat anti-mouse IgG (abcom) was used at 1/3,000 as the second antibody.

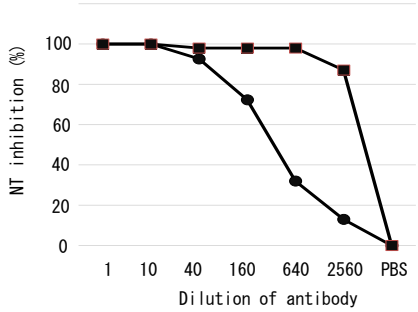

Fig.2. Neutralization test (NT) of VV by NP3 antibiody

About 100 PFU/ml of virus was incubated for 60 min at 37℃ with fourfold serial dilutions of NP2 (●) or rabbit anti-VV mouse serum (■) in MEM (+ 2% calf serum). The RK13 cells were incubated with the virus-antibody/sample for 60 min at 37℃. After 48 to 64 hrs of incubation at 37℃, plaques were visualized by staining with 0.13% crystal violet in 2% ethanol. Inhibition rate (%) was calculated as compared to complete inhibition (100%) of the antibody.

Reference: This antibody has not yet been used in publication.

Related products: #65-038 Anti-Vaccinia virus L1 protein (cross-reacts with Monkeypox virus), mouse monoclonal antibody (NP2)

Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.