Anti-Chickungunya Virus Capsid antibody, mouse monoclonal (CV-901)

65-420　　100 μg

Shipping and Storage: Ship at 4°C and store at -20°C.

Immunogen: Recombinant Chikungunya virus (CHIKV) capsid protein

Product: 1.0 mg/ml in PBS, 50% glycerol, filter sterilized.

Purity: IgG1 κ , Affinity-purified with Protein A

Specific Reactivity: Reacts with the capsid protein of CHIKV

Epitope: Major domain (amino acid 1 to 261) of CHIKV capsid protein.

Applications:

1. Western blot (1/500~1/1,000)
2. Immunofluorescence staining (1/500)
3. ELISA (assay dependent)

Other applications have not been tested.

Background: Chikungunya virus (CHIKV) is the aetiological agent of chikungunya fever, which is a mosquito-borne pathogen responsible for epidemics of debilitating arthritic disease. CHIKV belongs to the Alphavirus genus within the Togaviridae family and is an enveloped, single-stranded positive-sense RNA virus. The alphavirus genome is encodes four non-structural proteins (nsP1 to nsP4) and five structural proteins (capsid, E3, E2, 6K and E1). The alphavirus capsid protein (CP) is a multifunctional protein that has been shown to act as a serine protease for self-cleavage, bind viral genomic RNA and other CP molecules during nucleocapsid formation, and interact with viral spike proteins during virion formation and egress. The CP of CHIKV consists of 261 amino acids, which form two major domains. The N- terminal domain has a high degree of positive charge implicated in non-specific RNA binding, while the C-terminal domain harbors the globular protease and the binding site for the spike protein.

Data Link: UniProtKB:Q5XXP3(POLS-CHIK3)

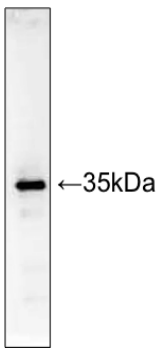


Fig.1. Identification of protein in CHIKV by Western blotting using monoclonal antibody.
The lysates of recombinant CHIKV protein (0.5mg/ml) were applied to SDS-PAGE. The monoclonal antibody was used at 1/500 dilution. The HRP-conjugated goat anti-mouse IgG (abcom) was used at 1/4,000 as the second antibody. A 34-35kDa band was identified as CHIKV capsid protein.

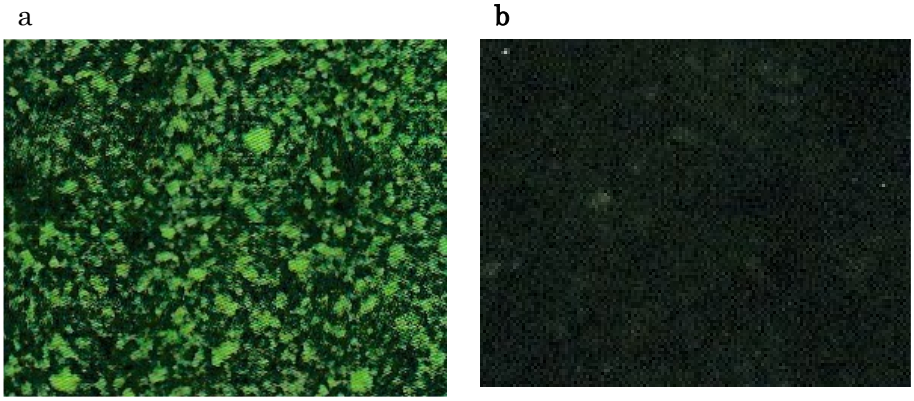
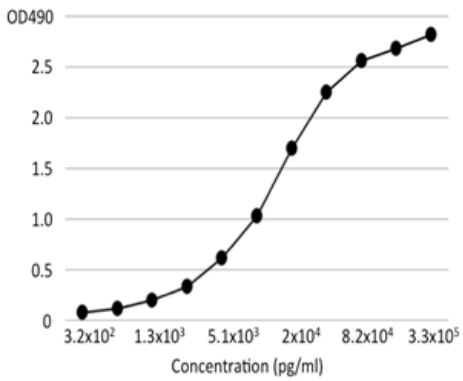


Fig.2. Detection of CHIKV capsid protein in CHIKV-infected cells (C6/36) by immunofluorescence staining. CHIKV infected cells (a) and uninfected cells (b) on a slide glass were fixed with aceton. The MAb was used at 1/500 dilution. The FITC-conjugated rabbit anti-mouse IgG (abcom) was used at 1/4,000 as the second antibody.

Fig.3. Titration of protein concentration of CHIKV by indirect ELISA using monoclonal antibody

The indicated amounts of recombinant CHIKV were coated onto the wells of the ELISA plate. After blocking with 5% skim milk, monoclonal antibody at the 1/5,000 dilution was added to the each well. HRP-conjugated goat anti-mouse IgG (100µl, x4,000 dilution, abcom) was added. As substrate, orthophenylenediamine was used. Optical density (OD) measured at 490nm.



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