

Antibody Datasheet / Certificate of Analysis

Product Name:	Mouse anti-Chikungunya virus Capsid protein
Clone number:	19B02
Isotype:	Mouse IgG1
Product code:	MAB12131-200
Batch Number:	TBC
Immunogen:	Inactivated native Chikungunya virus, strain 181/25
Amount:	200ug
Concentration:	1mg/ml
Buffer:	Phosphate Buffered Saline pH7.4
Preservative:	None present
Purification:	Antibody was purified by affinity chromatography on Protein A
Specificity:	This antibody is specific for the Capsid protein of Chikungunya virus. It demonstrates negligible cross-reactivity with other members of the alphavirus family, including Western Eastern and Venezuelan Encephalitis viruses. There is no cross-reactivity to Zika, Dengue or other flavivirus antigens.

Applications: ELISA, WB, Immunofluorescence

Antigen background: Chikungunya virus is the aetiological agent of chikungunya fever. CHIKV belongs to the *Alphavirus* genus, and is an enveloped, single-stranded positive-sense RNA virus ([Strauss & Strauss, 1994](#)). The alphavirus genome encodes four non-structural proteins (nsP1 to nsP4) and five structural proteins (capsid, E3, E2, 6K and E1).

CHIKV is transmitted to humans by *Aedes* mosquitoes, and disease is characterized by a rapid onset of fever, myalgia and often a rash (usually maculopapular), with chronic disease characterized by episodic, and often debilitating, polyarthralgia/polyarthrits. ([Suhrbier et al., 2012](#)). The largest epidemic of CHIKV disease ever reported began in 2004 and has since been responsible for up to 6.5 million human cases, primarily in Africa and Asia, with imported cases reported in over 40 countries. CHIKV infection is symptomatically similar to infection with Zika virus and Dengue virus, and differential diagnosis using immunoassay based testing is important in patient management.

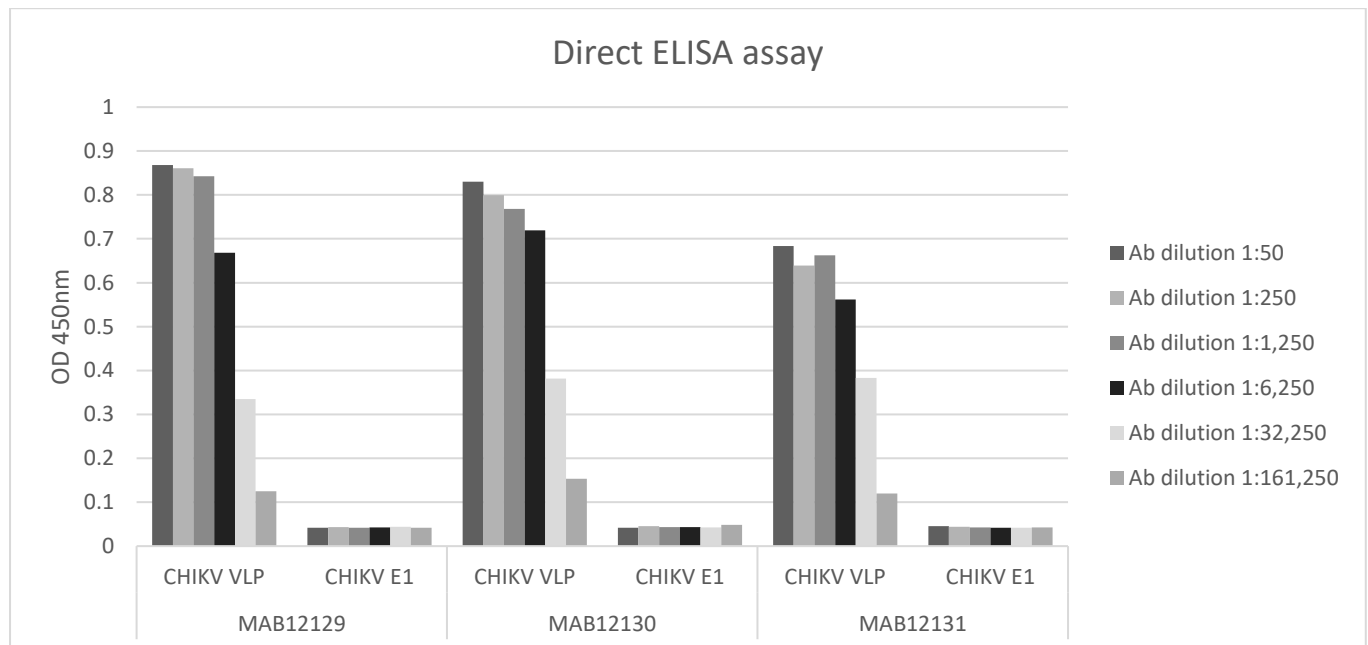
The alphavirus capsid protein (CP) is a multifunctional protein that has been shown to act as a serine protease for self-cleavage, binds viral genomic RNA and other CP molecules during nucleocapsid formation, and interact with viral spike proteins during virion formation and egress ([Choi et al., 1991](#)). The CP of CHIKV forms two major domains. The N-terminal domain is implicated in non-specific RNA binding, while the C-terminal domain harbours the globular protease and the binding site for the spike protein ([Hong et al., 2006](#)).

Storage: Store at +4⁰C for up to three months, or at -20⁰C for longer periods
The antibody is shipped at ambient temperature.
Avoid repeated freeze/thaw cycles.

ELISA

Plate preparation: NUNC Maxisorp plate coated with 100µl of 1µg/ml CHIKV E1 antigen and CHIKV VLP antigen using Carbonate buffer (pH- 9.47). Incubate the plate at RT for 1 hour. Wash the plate with TBS-T buffer (3X). Add 300µl of 5%BSA in 1X DPBS, incubate the plate at RT for 1 hour.

Assay procedure: Prepare 5-fold serial dilutions of antibodies (1:50 to 161,250) using 1% BSA/1XDPBS/0.05%T20 as diluent. Add 50µl of the prepared dilutions in the wells, seal the plate and incubate at RT for 1 hour on a rotatory shaker (~500 RPM). Wash the plate with TBS-T wash buffer (3X). Add 100µl of goat Anti-mouse IgG-HRP (1:10K) in all the wells and incubate the plate at RT for an hour, on a rotatory shaker (~500 RPM). Diluent used - 1%BSA/1XDPBS/0.05%Tween20. Wash the plate with TBS-T wash buffer (6X). Add 100µl of HK-TMB substrate in all the wells and incubate the plate at RT, until colour develops. Add 50µl of 1M HCl in all the wells and read the plate at 450nm.



Western Blot

100ng of CHIKV VLP loaded and Western blot performed with 1µg/ml primary antibody overnight at 4°C.

