

# Advantage Chikungunya IgM Card

First  
Indian Company  
to be granted  
Drug Manufacturing  
Licence for  
Chikungunya  
Rapid Test



- Rapid Test for Qualitative Detection of Chikungunya Specific IgM antibodies in Human Serum/ Plasma.
- One Step Test Procedure.
- Results within 15 minutes.
- Bio-hazard free, fully covered, see-through Device.
- No Instruments required.
- Excellent Sensitivity & Specificity.
- Long Shelf Life : 24 Months at 2-30°C
- Convenient Pack size : 10 Tests

.....the right choice for simple & accurate test ends here.



# Chikungunya ...an epidemic Arbovirolosis

## Chikungunya : ...an epidemic Arbovirolosis

Chikungunya is an arboviral disease transmitted by aedes mosquitoes. The disease typically consists of an acute illness characterised by fever, rash and incapacitating arthralgia. The word chikungunya, used for both the virus and the disease, means "to walk bent over" and refers to the effect of the joint pains that characterise this dengue-like infection. Chikungunya is a specifically tropical disease, but it is geographically restricted and outbreaks are relatively uncommon.



## Symptoms common between Chikungunya and Dengue, which make Differential Diagnosis difficult.

- FEVER**
- JOINT PAIN**
- FATIGUE**
- HEADACHE**
- NAUSEA**
- RASH**
- MUSCLE PAIN**
- VOMITING**

## Current Laboratory Testing Strategy for Chikungunya

### CDC Recommended<sup>\*(1)</sup>

- Human Infection**
- **Acute antibody (IgM) in serum and/or CSF.**
    - IgM ELISA or Microsphere Immunoassay
    - Confirmation by PRNT
  - Seroconversion in paired specimens
    - IgG ELISA and/or 4-fold rise in neutralizing antibody by PRNT
  - Detection of virus and/or viral RNA in serum and/or CSF.
    - Real time RT-PCR, consensus RT-PCR, or virus isolation

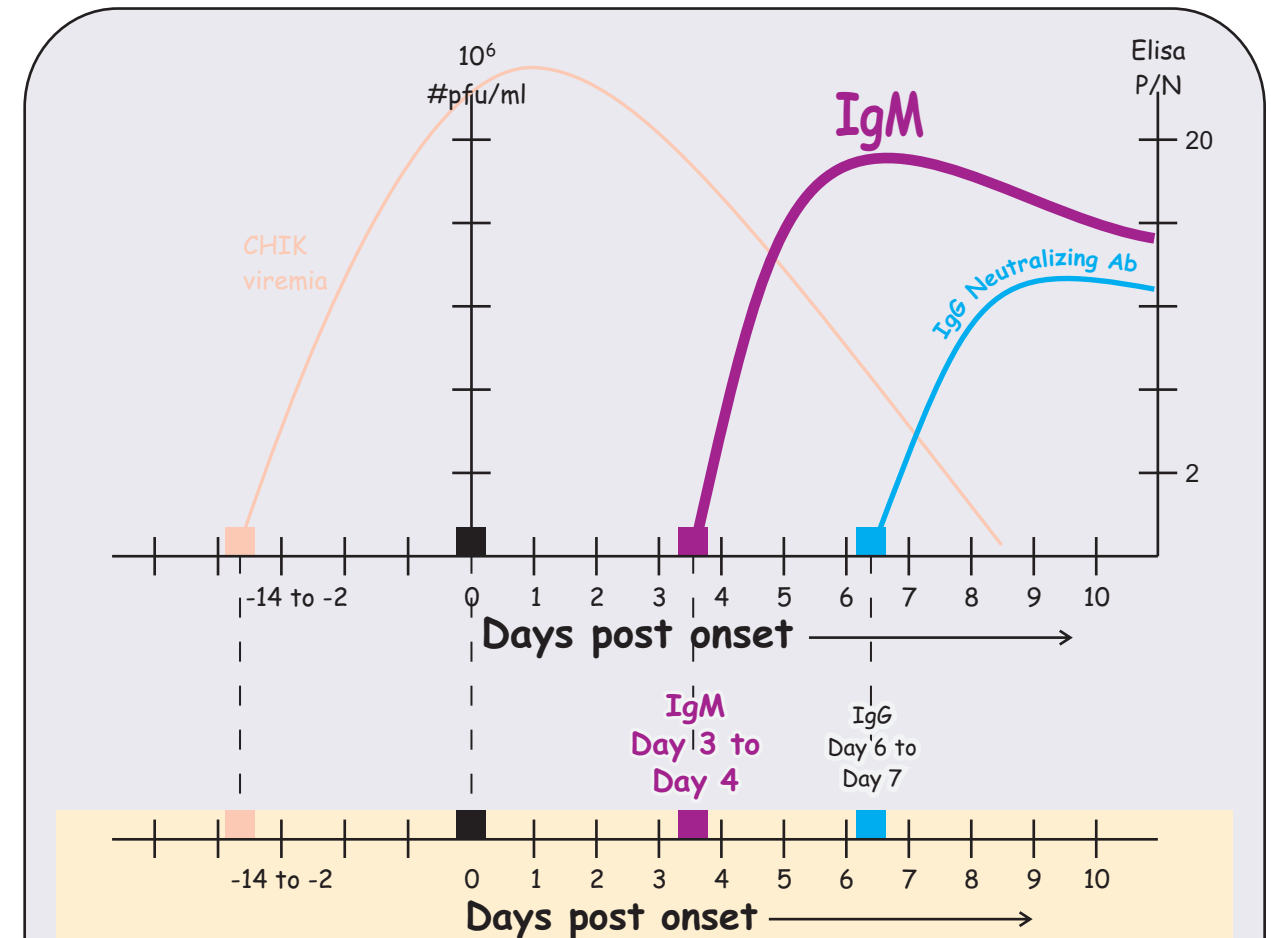
<sup>\*(1)</sup> Source : Laboratory Testing for Chikungunya Virus, CDC, Atlanta, USA  
[http://new.paho.org/hq/index.php?option=com\\_docman&task=doc](http://new.paho.org/hq/index.php?option=com_docman&task=doc)

### WHO Recommended<sup>\*(2)</sup>

- Laboratory criteria: at least one of the following tests in the acute phase:**
- Virus isolation
  - Presence of viral RNA by RT-PCR
  - **Presence of virus specific IgM antibodies in single serum sample collected in acute or convalescent stage.**
  - Four-fold rise of IgG titers in samples collected at least three weeks apart

<sup>\*(2)</sup> Source : Proposed case definition of Chikungunya Fever(WHO, SEARO)  
[http://www.searo.who.int/LinkFiles/Chikungunya\\_Def\\_Chikungunya\\_Fever.pdf](http://www.searo.who.int/LinkFiles/Chikungunya_Def_Chikungunya_Fever.pdf)

## Simplified Depiction of CHIK Viremia & Immune Reponse\*



The above graph shows that:

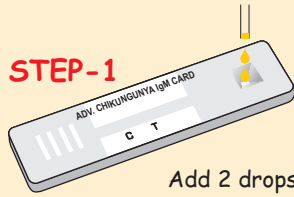
- Appearance of **IgM** levels : **Day 4 onwards**
- Appearance of **IgG** levels : **Day 7 onwards**

\* Source : Laboratory Testing for Chikungunya Virus, CDC, Atlanta, USA

Check for both Chikungunya and Dengue, as they can co-exist in a patient. A simultaneous detection of Chikungunya & Dengue will give a better picture of patient's illness.

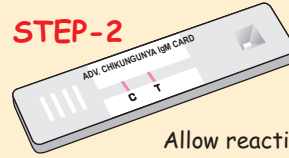
# Test Procedure

## STEP-1



Add 2 drops (70  $\mu$ l) of serum/plasma sample using sample dropper

## STEP-2

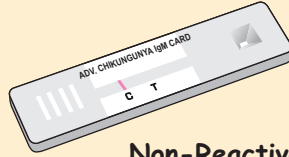


Allow reaction to occur during the next 15 minutes & **READ RESULTS.**

# Result Interpretation



**Reactive**  
for Chikungunya  
IgM Antibodies



**Non-Reactive**  
for Chikungunya  
IgM Antibodies



**Invalid Test**  
Re-Run the test

# Performance Characteristics

Sensitivity and Specificity studies were carried out in-house on samples, fresh as well as frozen, from low risk as well as high risk groups. Based on test panel of 2,000 plasma and serum samples, following is the sensitivity & specificity:

- (i) **IgM ANTIBODY SENSITIVITY: 97.5%**
- (ii) **IgM ANTIBODY SPECIFICITY: 99.1%**

This is a screening test. All samples detected reactive must be confirmed by using confirmatory test. Therefore for definitive diagnosis, the patient's clinical history, symptomatology as well as serological data, should be considered.

# References

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2. Planning M, Grywna K, van Esbroeck M, Emmerich P, Drosten C, Chikungunya fever in travelers returning to Europe from the Indian Ocean region 2006. Emerg Infect Dis 2008; 14:416-22.
3. Lanciotti R S, Kosoy OL, Laven JJ, et al. Chikungunya virus in US travelers returning from India, 2006. Emerg Infect Dis 2007; 13:764-7.
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5. N. Thamizh Selvam, P K S Nair, Salini Chandran, T N Venugopalan, N Jaya, Study on IgM antibodies in disease diagnosis and treatment evaluation in chikungunya, Journal of Pharmaceutical and biomedical sciences, 2010, 1(15).

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