

# **The Native Antigen Company**

Alphaviruses Factsheet



Alphavirus is a genus of a positive-sense, single-stranded RNA virus. These viruses spread mainly via mosquitoes causing a spectrum of illnesses from febrile conditions to severe arthritis and encephalitis. Their symptoms, similar to dengue and malaria, complicate accurate diagnosis, highlighting the need for effective and rapid diagnostics. The complex interactions involving environmental factors, vector competence, and host susceptibility contribute to the emergence and re-emergence of these viruses, leading to recent outbreaks across Africa, Asia, Australia, Europe, and America (Wesula Olivia et al., 2015).



Aedes spp. Chikungunya Virus



Anopheles spp.

Mayaro & O'nyong'nyong Viruses

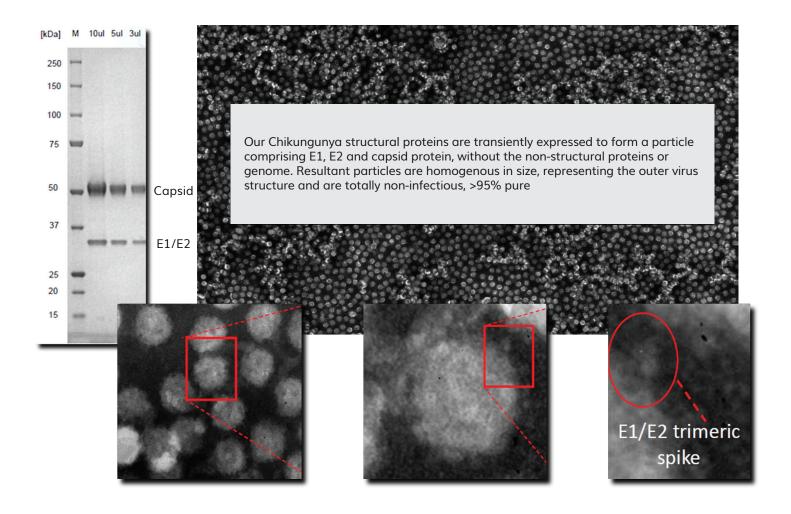


Culex and Aedes spp. Ross River Virus

| Our products        |  |  |        |                                  |
|---------------------|--|--|--------|----------------------------------|
| Alphavirus          | Envelope protein                                 | Virus-like- particles<br>(VLPs)                          | Lysate | Selection of antibodies          |
| Chikungunya Virus   | E1 and E2 produced in<br>HEK293 or Insects cells | +  | +      | Anti-VLP, E2 and capsid proteins |
| Mayaro Virus        | E2; His, Mouse or Human<br>Fc-Tag                | +  | -      | Anti-E1, E2 proteins             |
| Ross River Virus    | -  | preparation containing<br>VLPs and aggregates<br>thereof | -      | Anti-VLP, E1 , E2 proteins       |
| O'nyong'nyong Virus |  |  |        | Anti -VLP                        |

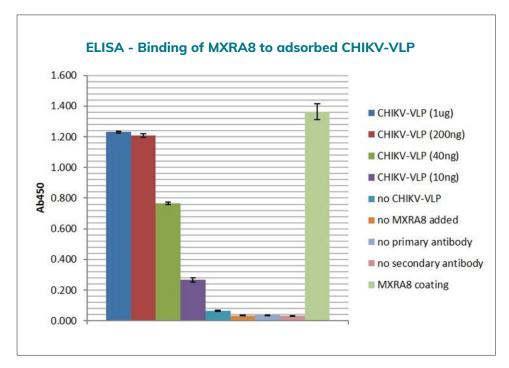
Our products are used by the most influential researchers in the field of infectious diseases, have a look at our **References Page** or **contact us** for the product recommendation tailored for your project!





## Virus receptors

The Native Antigen company also offers Mammalian expressed Human MXRA8 viral receptors. As shown below these receptors bind to our Chikungunya Virus-like particles.



#### Figure 1.

Various amounts of The Native Antigen Company's CHIKV-VLP coated onto a Maxisorp ELISA plate, then blocked with 2% BSA. After blocking the plate was incubated with 1ug/well of MXRA8.

The plate was then probed for MXRA8 bound to CHIKV-VLP with a mouse anti-His-tag antibody as primary antibody and anti-mouse-IgG-HRP as secondary antibody.



## **Antibody matched pairs**

Our experienced Assay Development Team prepared over 300 matched antibody pairs perfect for ELISA and Lateral Flow assays.

Contact us for more details: nac.contact@lgcgroup.com

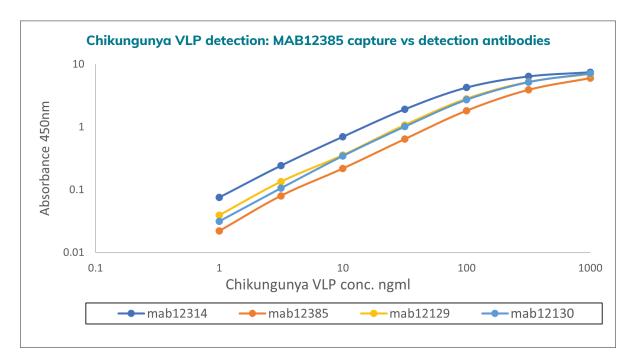


Figure 2. Example of the matched pair data produced by our assay experts.

## **Custom solutions**

If you have a unique need in the space of viral antigens or antibodies, we can offer our experience to collaborate in a bespoke development project. Our specialized team can produce native antigens, antibodies, and viral lysates, with options for further downstream purification. We operate to BSL-2 standards and offer multiple validated options for inactivating viruses, as well as multiple conjugation options.

Email: nac.contact@lgcgroup.com Telephone: +44 (0)1865 595230

## References

Wesula Olivia, L. et al. (2015) 'Global emergence of alphavirus esthat cause arthritis in humans', Infection Ecology & Didemiology, 5(1), p. 29853. doi:10.3402/iee.v5.29853.

