

## IVD\_12 - Kit Molecular ZC\_D Tipagem Bio-Manguinhos: arbovirus discriminatory assay in CSF samples

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**Introduction:** The ZC\_D Typing Bio-Manguinhos Molecular Kit was developed to meet a request from the Ministry of Health. After registration with the National Health Surveillance Agency (ANVISA), the kit was made available for use in Brazilian public central laboratories. It is intended for plasma and serum testing, and urine collection is recommended only for suspected cases of Zika. A collaborative study was carried out with the Faculty of Medicine of São José do Rio Preto (SP), at the beginning of February 2024. According to the city's epidemiological bulletin (February/2024), 141 cases of DENV and 1 case of CHIKV, were detected. Samples from the Faculty of Medicine Hospital were evaluated. Two patients had results detected for CHIKV in their CSF, a sample type that had not been previously tested with the ZC\_D Typing kit. During the month of February, a Dengue epidemic was declared in the city. We offer the ZC\_D Typing Kit as a discriminatory diagnostic tool, with the possibility of validation for testing on the CSF sample type.

**Objectives:** Assist in the discriminatory detection of arboviruses in epidemic regions and enable the testing of samples from symptomatic patients without a diagnosis.

**Methodology:** The ZC\_D Typing Bio-Manguinhos Molecular Kit is a qualitative and discriminatory multiplex test that uses the RT-PCR technique. It is divided into three triplex reactions: Z/C/RNase P, D1/D2/IC and D3/D4/IC.

**Results:** CSF samples from two patients were tested. Patient A: male, 71 years old, drowsy symptoms, convulsive crisis, decreased level of consciousness. Patient B: male, 89 years old, symptoms: fever, myalgia, reduced level of consciousness, lethargy, vomiting, died. Both obtained detectable CHIKV results in the discriminatory arbovirus testing.

**Conclusion:** The discriminatory detection of the ZC\_D Typing Kit is essential to determine the causative agent of arbovirus. The ZC\_D Typing Kit constitutes a fundamental diagnostic tool for the affirmative policy of the Ministry of Health, capable of differentially detecting co-circulating arboviruses in the national territory, causing epidemics in Brazil.

**Keywords:** Arbovirus; Discriminatory; Diagnosis