



Diagnostic Kit for Japanese Encephalitis Virus (JEV)

TECHNOLOGY AVAILABLE FOR TRANSFER

UNMET NEED & OPPORTUNITY

An emergence of disease burden with exponential growth rate and high cost of currently available kits for detection of Japanese encephalitis viral infection has raised the concern for developing a sensitive detection kit specifically for Japanese encephalitis virus (JEV). Commercially available kits are not economical and range from INR 15000-19000/- for 96 tests each. Need was felt for cost effective ELISA kit with high diagnostic sensitivity and specificity and reproducibility as compared to commercially available kits. Need was also felt for diagnosis of JE infection caused by flavivirus strain specific to India and Asia.

TECHNOLOGY

The technology provides an ELISA based diagnostic kit for identification of IgM antibodies in patients infected with JE flavivirus. The technology utilizes indigenous virus strains and indigenous anti JE monoclonal antibodies for detection of JE virus specific IgM antibodies. Due to this specificity and the kit has significant potential for use in the developing countries.

As per the validation report the results are as follows:

- Diagnostic sensitivity of the kit: 81% (Serum)
- Diagnostic specificity of the kit: 86% (Serum)

References

1. <https://www.who.int/news-room/fact-sheets/detail/japanese-encephalitis>
2. <https://www.alere.com/en/home/product-details/sd-bioline-jev-igm.html>
3. <https://www.smartmedicalbuyer.com/Brand/mytest-one-step-japanese-encephalitis-virus-jev-igm-test-kit>
4. Japanese Encephalitis: A Brief Review on Indian Perspectives
5. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3294746/>

UNIQUE SELLING PROPOSITION

Cost effective, Indigenous Diagnostic kit with sensitivity and specificity for diagnosis of Japanese Encephalitis Virus strain in India/ Asia based on monoclonal antibody IgM

STAGE OF DEVELOPMENT

Technology is ready for market (Pilot scale), validated at CMC, Vellore and Fort Collins, CO, USA.

JE PREVALENCE

Japanese encephalitis virus (JEV) is the leading cause of viral encephalitis worldwide; with an estimated 35,000 to 50,000 cases and 10,000 deaths annually. Globally an approximate of 20-30% of patients die and 30-50% of survivors develop significant neurological sequelae as per WHO report (2011)

India witnessed an outbreak of Japanese encephalitis infection in the year 2005 resulting in 1700 reported deaths mostly among children.

LICENSING OPPORTUNITY

BCIL is looking for a suitable industrial partner for commercialization of diagnostic kit for Japanese Encephalitis Virus infection.

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