Poster Exhibition Presentation

PE1/7 - Human Immunodeficiency Virus (HIV) Antibody Testing to Identify Recent Infection in HIV Type 1 Seropositive Persons

Y. Zagryadskaya[1], I. Sharipova[1], V. Puzyrev[1], A. Burkov[1], D. Neshumaev[2], L. Ruzaeva[2], N. Shevchenko[2], I. Olkhovskiy[3], T. Ulanova[4]

[1]RPC Diagnostic Systems, Nizhniy Novgorod, Russian Federation, [2]Krasnoyarsk Regional Centre of AIDS Prevention, Krasnoyarsk, Russian Federation, [3]Hematological Scientific Centre of Russian Academy of Medical Sciences (Krasnoyarsk Branch), Krasnoyarsk, Russian Federation, [4]DSI S.r.l. Saronno (VA), Saronno, Italy

Background: The estimation of new HIV infections in the population, or incidence, is crucial for understanding the status of the epidemic and providing information regarding the impact of prevention measures.

Objective: The aim of this study was to evaluate a developed assay DS-EIA-HIV-AB-TERM for the identification of recently acquired HIV-1 infections in HIV type 1 seropositive persons.

Methods: Recombinant antigens, comprising HIV-1 and HIV-1 (group 0) immunodominant regions were used for coating of microtiter plates. Mixture of biotin-labeled recombinant antigens and streptavidin labeled by horse radish peroxidase were used as conjugates. During the assay performance each serum sample was tested in native and diluted form. Efficiency assessment of the test was carried out using serum samples (n=206) with the preliminary defined time of HIV-1 infection which was identified based on HIV algorithm testing ("Krasnoyarsk Regional center of AIDS prevention", Russia). Additionally the assay assessment was carried out using seroconversion panels (n=29) (SeraCare, ZeptoMetrix, USA).

Results: The newly developed assay DS-EIA-HIV-AB-TERM is able to correctly identify as recent infection (up to 9 month) more than 90% of samples from HIV type 1 seropositive patients with the preliminary defined time of HIV infection and 100% of samples from commercial seroconversion panels.

Conclusion: Conducted study demonstrated high efficiency of the assay DS-EIA-HIV-AB-TERM for identification recently acquired HIV-1 infection.

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