

TEST: HUMAN T-LYMPHOTROPIC VIRUS TYPE I and TYPE II (HTLV-I/HTLV-II)

PRINCIPLE:

HTLV-I, a human type C retrovirus, has been etiologically associated with neoplastic conditions and a variety of demyelinating neurologic disorders including: adult T-cell leukemia (ATL), tropical spastic paraparesis (TSP) and/or HTLV-I Associated Myelopathy (HAM), and more recently HTLV-I associated polymyositis, arthritis and infective dermatitis. Antibodies to HTLV-I are found with high frequency in persons affected with these disorders. However, it is well established in studies from viral endemic areas that virus negative ATL and TSP/HAM are seen. HTLV-II was first isolated in 1982 from a patient having T-lymphocytic-hairy cell leukemia. Association of HTLV-II with leukemia pathogenesis is not well established; however, some cases of neurologic diseases resembling TSP/HAM have been recently reported to be associated with HTLV-II infection. Epidemiologic data suggest that HTLV-II is a new world virus common among Amerindians in North, Central and South America.

Neither HTLV-I nor HTLV-II cause acquired immunodeficiency syndrome (AIDS) and the HTLV-I virus is only remotely related to the AIDS virus, HIV. No cross reactivity with antibodies to HIV-1 and HIV-2 has been demonstrated for this assay. The findings of antibodies to HTLV-I and HTLV-II by this assay have no relationship to the presence of antibodies to HIV and does not imply any excess risk to AIDS. Transmission of both HTLV-1 and HTLV-2 occur via transfusion of cellular blood components, between needle sharing intravenous users and through sexual contact.

Initially reactive specimens are retested in duplicate using the original sample. Reactivity in either or both of these duplicate tests, reported as repeatedly reactive, is highly predictive of the presence of HTLV-I/HTLV-II antibodies in individuals at increased risk for HTLV infection. Additional, more specific tests such as Western Blot assay and radioimmunoprecipitation is necessary to determine if the positive antibody is HTLV-I and/or HTLV-II.

SPECIMEN REQUIREMENTS:

2ml serum collected in a red top tube with no additive or in a serum separator tube (gel barrier). Serum should be separated from the clot as soon as possible to avoid hemolysis. Store at 2-8°C up to 14 days. Store frozen at -20°C if not tested within 14 days. Avoid repeat freeze-thaw cycles.

METHOD: Enzyme Linked Immunoassay (ELISA)

REFERENCES:

1. Bender et al., Clinical Laboratory Procedure Manual. NCCLS code GP2-A, Vol. 4, No. 2.
2. Abbott HTLV-I/II Assay insert.
3. Wong-Staal, F., Gallo, R.C. 1985 Human T-lymphotropic viruses. Nature 317, 395-403.

Normal Range: Non-reactive

Turnaround Time: One Week