Human T-Lymphotrophic Virus Types I and II

Customer Service: Contact your local representative or find country specific contact information on www.abbottdiagnostics.com

Package insert instructions must be carefully followed. Reliability of assay results cannot be guaranteed if there are any deviations from the instructions in this package insert.

<table>
<thead>
<tr>
<th>Key to Symbols</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>LOT</td>
<td>Lot Number</td>
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<tr>
<td>REF</td>
<td>List Number</td>
</tr>
<tr>
<td>IVD</td>
<td>In Vitro Diagnostic Medical Device</td>
</tr>
<tr>
<td></td>
<td>Consult instructions for use</td>
</tr>
<tr>
<td>Caution</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Store at 2-8°C</td>
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<tr>
<td></td>
<td>Store at 15-30°C</td>
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<tr>
<td></td>
<td>Expiration Date</td>
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<td></td>
<td>Authorized Representative in the European Community</td>
</tr>
<tr>
<td></td>
<td>Manufacturer</td>
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<td></td>
<td>Activator Line Treatment</td>
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<td>Assay Kit Card</td>
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<td></td>
<td>Calibrators</td>
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<tr>
<td>CONTAINS: AZIDE</td>
<td>Contains Sodium Azide. Contact with acids liberates very toxic gas</td>
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<tr>
<td>DISTRIBUTED BY</td>
<td>Distributed by</td>
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<tr>
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<td>Line Cleaner</td>
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<td>MASTER LOT</td>
<td>Master Lot</td>
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<tr>
<td>PIPETTE TIPS</td>
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<tr>
<td>PRIME/PURGE ACCESSORIES</td>
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<tr>
<td>PRODUCED FOR ABBOTT BY</td>
<td>Produced for Abbott by</td>
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<td>PRODUCT OF USA</td>
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<td>WARNING: SENSITIZER</td>
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<td>WARNING: SEVERE IRRITANT</td>
<td>Warning: Severe Irritant</td>
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</tbody>
</table>

See REAGENTS section for a full explanation of symbols used in reagent component naming.
NAME AND INTENDED USE

The ABBOTT PRISM HTLV-1/HTLV-2 assay is an in vitro chemiluminescent immunosass (CLIA) for the detection of antibodies to human T-lymphotropic virus Type I and/or human T-lymphotropic virus Type II (anti-HTLV-I/anti-HTLV-II) in human serum and plasma specimens. The ABBOTT PRISM HTLV-1/HTLV-2 (CHLIA) is intended to screen individual human donors, including volunteer donors of whole blood and blood components, and recipients donors for the presence of anti-HTLV-I/II. It is not intended for use in testing blood and plasma specimens to screen organ donors when specimens are obtained while the donor’s heart is still beating. It is not intended for use on cord blood specimens.

SUMMARY AND EXPLANATION OF THE TEST

HTLV-I, a human Type-C retrovirus,1,2 has been atologically associated with neoplastic conditions and demyelinating neurologic disorders including: adult T-cell leukemia (ATL),3,4 and HTLV-I associated myelopathy/tropical spastic paraparesis (HAM/TSP).4,5 HTLV-II has been linked with overt HTLV-II associated myelopathy and ATL,6,7 and lends itself to a dual etiology with HTLV-I.8,9 Antibodies to HTLV-I and II are found with high frequency in persons afflicted with these disorders. However, it is well established in studies from viral endemic areas that HTLV-I antibody-negative ATL and HAM/TSP are seen.10,11

HTLV-I infection is endemic in the Caribbean,12 Japan,13 in some areas of Africa, Central and South America,14,15 in Melanesia,16 the Middle East,17 and central and northern Australia.18,19 In the United States, HTLV-I has been identified in AD patients, intravenous drug users, and in healthy individuals.20,21 Transmission of HTLV-I and HTLV-II infection to transfusion recipients of infected cellular blood products is well documented.22,23 Transmission can also occur via breast feeding,24 sexual contact,25 and sharing of contaminated needles and syringes by intravenous drug users.26,27 HTLV-I causes ATL in less than 4% of infected individuals and typically only after long latency periods.28,29

The ATL syndrome appears to result from exposure early in life as occurs during maternal transmission via breast milk and may be dependent on the number and virulence of the proviral load.28,29 The number of photons collected from a test sample is less than the cutoff value, the sample is considered the test is positive for anti-HTLV-I and/or anti-HTLV-II by the criteria of the ABBOTT PRISM HTLV-1/2 assay. These specimens need not be further tested as collected from a test sample is greater than equal to the cutoff value, the sample is considered reactive for anti-HTLV-I and/or anti-HTLV-II by the criteria of the ABBOTT PRISM HTLV-1/2 assay. Specimens which are initially reactive must be handled according to the table in the SPECIMEN COLLECTION AND PREPARATION FOR ANALYSIS section of this package insert and released in duplicate. Follow appropriate FDA recommendations and regulations for specimens found to be repeatedly reactive. Customers outside the U.S. must follow their country’s government recommendations and regulations for specimens found to be repeatedly reactive. For further information regarding CHLIA technology, refer to the ABBOTT PRISM Operations Manual, Section 3.

REAGENTS

NOTE: Each specific component description noted below is accompanied by a unique symbol. These symbols appear on both the component labels and on the corresponding instrument tubing identifier labels. They are meant to facilitate identification and installation of reagent bottles within the ABBOTT PRISM System ambient reagent bay and reagent changer.

ABBOTT PRISM HTLV-1/HTLV-2 Assay Kit (REF: 6550-58)

NOTE: Do not mix reagents from different bottles. Do not mix or interchange reagents from different ABBOTT PRISM HTLV-1/HTLV-2 Assay Kits.

- **MICROPARTICLES**: 1 Bottle (319 mL) Human T-Lymphotropic Virus Types I and II Coated Microparticles in phosphate buffer with Tween 20 and protein stabilizers. Minimum concentration: 0.030% solids. Preservative: 0.1% sodium azide. (Symbol: △)

- **CONJUGATE**: 1 Bottle (331 mL) Anti-Biotin (Mouse Monoclonal) Acridinium Conjugate in phosphate buffered saline with Triton X-100 and protein stabilizers. Minimum concentration: 0.05 μg/mL. Preservative: 0.1% sodium azide. (Symbol: □)

- **CAL**: 3 Bottles (10.4 mL each) Negative Calibrator (Human). Recalculated, inactivated plasma reactive for anti-HTLV-I. Minimum Sample/Cutoff is 200. Positive Calibrator may be cross-reactive with HTLV-II antigens. Preservative: 0.1% sodium azide. (Symbol: ◯)

- **CAL**: 3 Bottles (10.4 mL each) Positive Calibrator (Human). Recalculated, inactivated plasma reactive for anti-HTLV-I. Minimum Sample/Cutoff is 150. Positive Calibrator may be cross-reactive with HTLV-II antigens. Preservative: 0.1% sodium azide. (Symbol: ◯)

- **TRITONX/COV Control**: 3 Bottles (10.4 mL each) HTLV-I/II Positive Assay Control (1) (Human). Recalculated, inactivated plasma reactive for anti-HTLV-I. Minimum Sample/Cutoff is 150. HTLV-II Positive Assay Control (1) may be cross-reactive with HTLV-I antigens. Preservative: 0.1% sodium azide. (Symbol: PC2)

- **PROBE**: 1 Bottle (324 mL) Human T-Lymphotropic Virus Types I and II Biotinylated Probe, Bispecific Antibodies, HTLV-I, HTLV-II, and HIV-1 Envelop Enriched Viral Lysate in TRIS buffered saline with calcium and protein stabilizers. Minimum concentration: 0.034 μg/mL protein. Preservative: 0.1% ProClin 300. (Symbol: □)

NOTE: The ABBOTT PRISM Calibration Report identifies the ABBOTT PRISM HTLV-I/II Positive Assay Control (1) as "Pos Assay CTL (1)."

Other Reagents Required

ABBOTT PRISM HTLV-1/HTLV-2 Wash Kit (REF: 6550-58)

- **TRANSFER WASH**: 1 Bottle (3542 mL) Transfer Wash. Phospho-buffered saline. Preservative: 0.1% sodium azide. (Symbol: --)

- **CONJUGATE WASH**: 1 Bottle (725 mL) Conjugate Wash. MES (2-[N-morpholino]ethanesulfonic acid) buffered saline. Preservative: 0.1% ProClin 300. (Symbol: □)

- **PROBE WASH**: 1 Bottle (1718 mL) Probe Wash. TRIS buffered saline with Triton X-100. Preservatives: 0.1% ProClin 300 and 0.1% sodium azide. (Symbol: --)
ABBOTT PRISM Activator Concentrate (REF. 1A75-02 or 3L27-02)

**ACTIVATOR CONCENTRATE**
- 4 Bottles (906 ml each) Activator Concentrate. 0.4% hydrogen peroxide/0.08% diethylenetriaminepentaacetic acid.

ABBOTT PRISM Activator Diluent (REF. 1A75-01 or 3L27-01)

**ACTIVATOR DILUENT**
- 4 Bottles (900 ml each) Activator Diluent. 0.3 N sodium hydroxide.

ABBOTT PRISM Run Control Kit (REF. 3E60-10)

Or

ABBOTT PRISM Positive Run Control Kit (REF. 3E60-11)

**NOTE:** Each batch MUST and in a release control (ABBOTT PRISM Positive Control). The ABBOTT PRISM Positive Control (included in Kit REF. 3E60-10 or 3E60-11) must be used as the release control which has been configured to validate system functionality and release sample results. Refer to the ABBOTT PRISM Run Control Kit package insert or the ABBOTT PRISM Positive Run Control Kit package insert for detailed handling and use instructions.

**WARNINGS AND PRECAUTIONS**

- **IVD**
  - The performance characteristics of this product have not been established for the laboratory diagnosis of HTLV-I/HTLV-II infection.
  - Package insert instructions must be carefully followed. Reliability of assay results cannot be guaranteed if there are any deviations from the instructions in this package insert.

**Safety Precautions**

**CAUTION:** This product contains human sourced and/or potentially infectious components. Refer to the REAGENTS section of this package insert. No known test method can offer complete assurance that products derived from human sources will not transmit infection. Therefore, all human sourced materials must be considered potentially infectious. It is recommended that these reagents and human specimens be handled in accordance with the OSHA Standard on Bloodborne Pathogens. Biosafety Level 2 or other appropriate biosafety practices should be used for materials that contain or are suspected of containing infectious agents.

These precautions include, but are not limited to the following:

- Wear gloves when handling specimens or reagents.
- Do not pipette by mouth.
- Do not eat, drink, smoke, or apply cosmetics, or handle contact lenses in areas where specimens or reagents are handled.
- Clean and disinfect all spills of specimens or reagents using an appropriate disinfectant, such as 0.1% sodium hypochlorite, or other suitable disinfectants.
- Decontaminate and dispose of all specimens, reagents, and other potentially contaminated materials in accordance with local, state, and federal regulations.
- The human plasma used in the Negative Calibrator is nonreactive for HBsAg, HIV-1 Ag or HIV-1 RNA, anti-HIV-1/HIV-2, anti-HCV, and anti-HTLV-I/HTLV-II.
- The human plasma used in the Positive Calibrator is reactive for anti-HTLV-I, and nonreactive for HBsAg, HIV-1 Ag or HIV-1 RNA, anti-HIV-1/HIV-2, and anti-HCV.
- The human plasma used in HTLV-II Positive Assay Control (1) is reactive for anti-HTLV-II and nonreactive for HBsAg, HIV-1 Ag or HIV-1 RNA, anti-HIV-1/HIV-2, and anti-HCV.
- This product contains sodium azide; for a specific listing, refer to the REAGENTS section of this package insert. Contact with acids liberates very toxic gas. This material and its container must be disposed of in a safe way.

The following warnings and precautions apply to the Biologically Probe and Purr Concentrate

**WARNING:** Contains methylthithioalcohols.

**Prevention**
- P261 Avoid breathing dust/ fumes, use respirator.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P280 Wear protective gloves/ protective clothing/ eye protection.

**Response**
- P302-P303 IF ON SKIN: Wash with plenty of water.
- P333-P337 IF IN EYES: Wash with water for 15 minutes.
- P361-P364 Take off contaminated clothing and wash it before reuse.

**Disposal**
- P201 Dispose of contents/container in accordance with local regulations.

**Handling Precautions**

- Do not use kits beyond the expiration date.
- Gently invert each component several times prior to loading the original container on the ABBOTT PRISM System to ensure a homogenous solution. Additional gentle inversion may be required to thoroughly resuspend microspheres. Avoid foaming.
- Gently invert calibrators and assay control in the calibrator pack several times prior to each use.
- Each component of the ABBOTT PRISM HTLV-I/HTLV-II Wash Kit should be at room temperature (15-30°C) and then mixed before loading onto the ABBOTT PRISM System.
- Do not mix reagents or calibrators/assay controls from different ABBOTT PRISM HTLV-I/HTLV-II Assay Kits.
- Any lot of ABBOTT PRISM HTLV-I/HTLV-II Wash Kit can be used with any lot of ABBOTT PRISM HTLV-I/HTLV-II Assay Kit.
- Any lot of ABBOTT PRISM Activator Concentrate, ABBOTT PRISM Activator Diluent, or Control from ABBOTT PRISM Run Control Kit or ABBOTT PRISM Positive Run Control Kit may be used with any lot of any ABBOTT PRISM Assay Kit.
- Treat Negative and Positive Controls and Controls as specimens.
- Avoid microbial and chemical contamination of samples, reagents, and equipment. The use of disposable tipette tips is recommended for any preliminary sample transfer.
- Use accurately calibrated equipment.
- Do not freeze reagents.
- Failure to adhere to instructions in the ABBOTT PRISM Operations Manual or package insert may result in erroneous test results.
- Use caution when handling samples, reagent bottles, and reagent caps to prevent cross contamination.

Additional safety and handling precautions and limitations for the assay kit, calibrators, specimens, controls, and other reagents are described in the ABBOTT PRISM Operations Manual, Sections 7 and 8.

**Preparation of Activator Solution**

Activator Solution must be prepared by mixing equal parts of ABBOTT PRISM Activator Concentrate and ABBOTT PRISM Activator Diluent. The Activator Solution expires 24 hours from preparation. The ABBOTT PRISM Activator Concentrate may be used immediately after removing from the refrigerator. The volume of Activator Solution required for multiple tests is calculated by the ABBOTT PRISM System software. Refer to the ABBOTT PRISM Operations Manual, under PLAN WORK LOAD, for additional information. Use clean pipettes and/or metal-free containers (such as plasctiware or acid-washed and purified or equivalent water-rinsed glassware) to measure. Refer to the ABBOTT PRISM Operations Manual for the definition of purified water. Prepare the Activator Solution in the bottle provided in the ABBOTT PRISM Accessory Kit (REF. 6A36-50). Cover the bottle opening securely with the cap provided and invert gently. Mix for 10 minutes. The Activator Solution must be stored at 15-30°C and used within 24 hours of preparation.

**Storage Instructions**

- Store the ABBOTT PRISM HTLV-I/HTLV-II Assay Kit, ABBOTT PRISM Run Control Kit, ABBOTT PRISM Positive Run Control Kit, and ABBOTT PRISM Activator Concentrate at 2-8°C.
- Store the ABBOTT PRISM HTLV-I/HTLV-II Wash Kit and ABBOTT PRISM Activator Diluent at room temperature (15-30°C).
- Store ABBOTT PRISM Pipette Tips and ABBOTT PRISM Reaction Trays in their original packaging until use.
- The Activator Solution must be stored at 15-30°C and used within 24 hours of preparation.

**Indications of Instability or Deterioration of Reagents**

The ABBOTT PRISM System will not continue to process samples when calibrator or positive assay control values do not meet specifications. This may indicate either deterioration or contamination of reagents, or instrument failure. Refer to the ABBOTT PRISM Operations Manual, Section 10, for additional information.

**INSTRUMENT PROCEDURE**

- For the software versions that may be used to perform the assay, refer to the ABBOTT PRISM Assay / Software Version Matrix located in the Supplemental Information tab of the ABBOTT PRISM Operations Manual.
- Refer to the ABBOTT PRISM Operations Manual for a detailed description of Instrument Procedures.
- Refer to the ABBOTT PRISM Operations Manual, Section 7, for limitations associated with test management.
- For optimal performance, it is important to follow the routine maintenance procedures defined in the ABBOTT PRISM Operations Manual, Section 9.
SPECIMEN COLLECTION AND PREPARATION FOR ANALYSIS

- Serum (including serum collected in serum separator tubes), plasma collected in EDTA, potassium oxalate, sodium citrate, ACD-A, ACD-B, CPD, CPD-A, or CPDA-I anticoagulants, or plasma collected from segmented tubing may be used with the ABBOTT PRISM HTLV-I/HTLV-II assay. Follow the manufacturer’s processing instructions for serum and plasma collection tubes.

CAUTION: Do not use specimens collected in heparin. Use of heparin as an anticoagulant may cause a reduction in Sample Net Counts and in Sample Net Counts/Count Value (S/CV) for ABBOTT PRISM HSV; therefore, heparin is not recommended for any ABBOTT PRISM assay.

- This assay was designed and validated for use with individual human serum and plasma specimens. This assay has not been validated for use with pooled specimens.

- Do not use heat-inactivated specimens.

- Do not use specimens with obvious microbial contamination.

- When shipped, specimens must be packaged and labeled in compliance with applicable regulations covering the transport of clinical specimens and infectious substances. Specimens may be shipped at 30°C or colder for a period not to exceed 7 days. Prior to freezing, the serum or plasma should be removed from the clot or red blood cells.

- Specimens may be stored for up to 14 days at 2-8°C. If storage periods greater than 14 days are anticipated, the serum or plasma should be removed from the clot or red blood cells to avoid hemolysis. Store the serum or plasma frozen (-20°C or colder).

- Previously frozen specimens must be mixed gently and thoroughly after thawing and centrifuged according to Table II in this section.

- Twenty nonreactive and 40 low-level reactive specimens showed no qualitative performance differences when subjected to 6 freeze-thaw cycles. However, some specimens that have undergone multiple freeze-thaw cycles or have been stored frozen for prolonged periods may give erroneous or inconsistent test results.

NOTE: Some specimens nonreactive for anti-HTLV-I and/or anti-HTLV-II that have been subjected to frozen storage have exhibited nonspecific reactivity in the ABBOTT PRISM HTLV-I/HTLV-II assay.

- Clear, non-hemolyzed specimens should be used when possible. Specimens containing visible particulate matter may give erroneous or inconsistent test results.

- No qualitative performance differences were observed when 20 nonreactive and 40 low-level reactive specimens were spiked with elevated levels of bilirubin (≤ 20 mg/dL), hemoglobin (≤ 500 mg/dL), red blood cells (≤ 9.4 x 10⁶), triglycerides (≤ 3000 mg/dL), or protein (≤ 12 g/dL). However, specimens that contain greater concentrations of these potentially interfering substances have not been tested. The impact of greater concentrations of these potentially interfering substances on the ABBOTT PRISM HTLV-I/HTLV-II assay is unknown.

- Performance has not been established using cadaveric specimens, umbilical cord blood, or body fluids such as urine, saliva, semen, amniotic fluid, cerebrospinal fluid, or pleural fluid. These specimens should not be tested using the ABBOTT PRISM HTLV-I/HTLV-II assay.

- Specimens collected by plasmapheresis that have not been frozen do not require centrifugation. All other specimens (including previously frozen plasmapheresis specimens) must be centrifuged as follows:

<table>
<thead>
<tr>
<th>Centrifugation Time (minutes)</th>
<th>RCF (x g)</th>
<th>g-minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>3,000</td>
<td>30,000</td>
</tr>
<tr>
<td>15</td>
<td>2,000 - 3,000</td>
<td>30,000 - 45,000</td>
</tr>
<tr>
<td>20</td>
<td>1,500 - 2,000</td>
<td>30,000 - 60,000</td>
</tr>
<tr>
<td>25</td>
<td>1,300 - 1,500</td>
<td>32,500 - 75,000</td>
</tr>
</tbody>
</table>

Convert rpm to RCF as follows: 
RCF = \( 1.12 \times f_{max} \) (rpm/1000)²

Convert RCF to rpm as follows: 
rpm = \( \frac{RCF}{1.12 \times f_{max}} \)

- The relative centrifugal force generated during centrifugation.

- The revolutions per minute of the rotor on which the specimens are being spun (usually the digital readout on the centrifuge will indicate the rpm).

- The time should be measured from the time the rotor reaches the required RCF or rpm to the time it begins deaccelerating.

- Radius of the rotor in millimeters. The radius measured is dependent on whether the rotor is a fixed angle rotor or a swinging bucket rotor. This value is typically provided with the rotor, by the manufacturer. For the fixed angle rotor, \( f_{max} \) is the measure of the distance from the rotor axis (center) to the bottom of the specimen tube in the rotor or rotor adapter. For the swinging bucket rotor, \( f_{max} \) is a measure of the distance from the rotor axis (center) to the bottom of the specimen in the rotor adapter or bucket at full extension.

NOTE: If custom tube adapters (i.e., adapters not defined by the centrifuge manufacturer) are used, then the radius (\( f_{max} \)) should be manually measured in millimeters and the RCF calculated.

- The unit of measure for the product of RCF (x g) and centrifugation time (minutes).

### Table II

<table>
<thead>
<tr>
<th>Centrifugation Time (minutes)</th>
<th>RCF (x g)</th>
<th>g-minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>12,000</td>
<td>180,000</td>
</tr>
<tr>
<td>20</td>
<td>9,000 - 12,000</td>
<td>180,000 - 240,000</td>
</tr>
<tr>
<td>25</td>
<td>7,200 - 12,000</td>
<td>180,000 - 360,000</td>
</tr>
</tbody>
</table>

ANY specimen (excluding non-frozen plasmapheresis) not tested within 24 hours of initial centrifugation, must be recentrifuged from 30,000 to 75,000 g-minutes as defined for non-frozen specimens.

NOTE: Specimens retested within 24 hours of initial centrifugation do not require recentrifugation.

FAILURE TO FOLLOW THE SPECIFIED CENTRIFUGATION PROCEDURE MAY GIVE ERRONEOUS OR INCONSISTENT TEST RESULTS.

### Specimen Volume

The specimen volume required to perform a single assay on the ABBOTT PRISM System varies according to the number and type of assays, and the different specimen containers. The ABBOTT PRISM HTLV-I/HTLV-II assay requires 100 µL sample dispense. For ABBOTT PRISM Sample Cups, the minimum specimen volume required for one ABBOTT PRISM HTLV-I/HTLV-II assay is 400 µL. For primary or aliquot tubes, or additional assay volume requirements, refer to the ABBOTT PRISM Operations Manual, Section 5.

### PROCEDURE

#### Materials Provided

- REF 6E50-68 ABBOTT PRISM HTLV-I/HTLV-II Assay Kit

#### Materials Required but Not Provided

- REF 6E50-68 ABBOTT PRISM HTLV-I/HTLV-II Wash Kit
- REF 1A75-02 or 3L27-02 ABBOTT PRISM ACTIVATOR CONCENTRATE
- REF 1A75-01 or 3L27-01 ABBOTT PRISM ACTIVATOR DILUENT
- REF 5A07-01 ABBOTT PRISM REACTION TRAYS
- REF 5A07-10 ABBOTT PRISM "PIPETTE TIPS"
- REF 6A36-60 ABBOTT PRISM Accessory Kit
- REF 3E00-10 ABBOTT PRISM Run Control Kit
- REF 3E00-11 ABBOTT PRISM Positive Run Control Kit
- REF 6A36-31 ABBOTT PRISM "RUN CONTROL ADAPTERS"
- Protective Disposable Gloves
- Disinfectant
- Purified Water-rinsed or Clean Disposable Measuring Equipment

#### Additional Materials Available

- REF 7B36-01 ABBOTT PRISM SAMPLE CUPS
- REF 1A75-10 or 3L27-10 ABBOTT PRISM ACTIVATOR LINE TREATMENT
- REF 7A03-01 or 3M-00-01 ABBOTT PRISM "PRIME/PURGE ACCESSORIES"
- REF 7A03-30 or 3M-00-30 ABBOTT PRISM "PURGE CONCENTRATE"
- REF 7A03-31 ABBOTT PRISM "LINE CLEANER"
ABBOTT PRISM HTLV-I/HTLV-II ASSAY PROCEDURE

Key procedures for the process of testing samples that require operator interaction are listed below as reminders. For detailed information concerning batch time, maximum batch size, reagent handling and loading, and associated procedural steps, refer to the ABBOTT PRISM Operations Manual, Sections 2, 5, and 7.

- Enter a Plan Work Load (refer to the ABBOTT PRISM Operations Manual, Section 5).
- Replace reagents as needed (refer to the ABBOTT PRISM Operations Manual Sections 5 and 7).

NOTE: Gently invert each component several times prior to loading on the ABBOTT PRISM System to ensure a homogenous solution. Additional gentle inversion may be required to thoroughly resuspend microparticles. Avoid foaming.
- Gently invert calibrator and assay control in the calibrator pack several times prior to each use. Each component of the ABBOTT PRISM HTLV-I/HTLV-II Visual Kit should be at room temperature (15-30°C) and then mixed before loading onto the ABBOTT PRISM System.
- Verify that all tubing label symbols match the symbols on each reagent label. (Refer to the symbol key in the REAGENTS section of this package insert, and the ambient reagent bay and refrigerator diagrams provided with the ABBOTT PRISM System.)
- Verify that all tubing is securely fastened to the corresponding wash and reagent bottles.
- Inspect the waste containers. Empty and clean as defined in the ABBOTT PRISM Operations Manual, Section 9, if necessary.

Prepare Activator Solution (refer to the Preparation of Activator Solution section of this package insert) and load into the ABBOTT PRISM System.
- Verify adequate number of ABBOTT PRISM Reaction Trays are in the Tray Loader.
- Verify adequate number of ABBOTT PRISM Pipette Tips are in the Pipette Tip Rack.
- Perform the prime procedure (refer to the ABBOTT PRISM Operations Manual, Section 5).
- Initiate sample processing. Gently invert calibrator and assay control in the calibrator pack several times. Open the bottles in the calibrator pack and place in the calibrator rack. Load the calibrator rack and sample racks, including the run controls. Refer to the QUALITY CONTROL PROCEDURES, Control Handling Procedure, under Controls in this package insert.
- After the calibrator and positive assay control have been automatically pipetted, remove the calibrator rack. Close the calibrator and positive assay control bottles and return them to 2-8°C storage.
- Each specimen is initially tested once, unless the operator overrides this automatic function of the ABBOTT PRISM System.
- Sample racks may be removed after the samples have been pipetted.

NOTE: No operator interaction is required for the following steps, which are automatically carried out by the ABBOTT PRISM System: reaction tray transport, calibrator/assay control/sample/release control pipetting, incubation, reagent dispense, sample reading, data reduction, run validity and result determination.
- After specimen processing is complete, perform the purge procedure. (Refer to the ABBOTT PRISM Operations Manual, Section 5)
- Refer to the ABBOTT PRISM Operations Manual, Section 3, for a detailed description of ChLIA procedures. The ABBOTT PRISM HTLV-I/HTLV-II assay is a three-step ChLIA procedure.

QUALITY CONTROL PROCEDURES

Calibration

The ABBOTT PRISM HTLV-I/HTLV-II Negative and Positive Calibrators and HTLV-II Positive Assay Control (1) are automatically tested in triplicate at the beginning of each batch. The ABBOTT PRISM System will not generate results when calibrator or positive assay control values do not meet specifications. This may indicate either deterioration or contamination of reagents, or instrument failure.

Controls

1. The ABBOTT PRISM Positive Control MUST be included as the last sample in each batch as a release control. The operator is prompted to include this control as the last sample in every batch, and the ABBOTT PRISM Positive Control is then automatically tested as a single replicate. This control must meet specifications defined in the ABBOTT PRISM Run Control package insert or the ABBOTT PRISM Positive Control kit package insert in order to validate system functionality and release sample results. If this control does not meet specifications defined in the ABBOTT PRISM Run Control kit package insert or the ABBOTT PRISM Positive Control kit package insert, refer to the ABBOTT PRISM Operations Manual, Section 10, for additional information.

2. Additional controls may be run at the operator’s discretion (refer to the ABBOTT PRISM Operations Manual, Section 3). Invalidate controls: Additional controls may be run anywhere within a batch as an invalid control. Specifications may be assigned to invalidating controls. If an invalidating control fails to meet assigned specifications, sample processing is shutdown and no sample results are calculated or provided by the instrument. When an invalidating control meets assigned specifications, sample processing continues and a valid release control (ABBOTT PRISM Positive Control) result is required to release data. Non-validating controls: Additional controls may be run anywhere within a batch as a non-validating control. Specifications may be assigned to non-validating controls. A valid release control (ABBOTT PRISM Positive Control) result is required to release data. If the user-assigned specifications for the non-validating control(s) are not met and the release control specifications are met, there will be no effect on sample processing. In this case, reactive sample results must not be considered invalid.

3. Control Handling Procedure
   a. Place run control adapters into the sample rack. The adapters can be placed in any rack position except 1, 2, 27 or 28.
   b. Place each run control bottle into an adapter in the sample rack such that when the bottle flip-top cap is opened, it can be snapped into an open position within the adapter.
   c. As mentioned above, place an ABBOTT PRISM Positive Control after the last sample tested in the batch. The controls can be placed in any rack position except 1, 2, 27, or 28.

Refer to the ABBOTT PRISM Operations Manual, Section 3, for additional information on calibrators, assay controls and run controls.

ASSAY PARAMETER SPECIFICATIONS

The ABBOTT PRISM HTLV-I/HTLV-II assay parameter specifications have been factory set. These parameters cannot be printed, displayed, or edited.

RESULTS

Calculation of Cutoff and S/CO Values

The ABBOTT PRISM System calculates the ABBOTT PRISM HTLV-I/HTLV-II assay cutoff value using the following formula.

Cutoff Value = Mean Negative Calibrator (NC) Net Counts + (0.15 x Mean Positive Calibrator (PC) Net Counts)

Example:
- Mean NC Net Counts = 1,100
- Mean PC Net Counts = 6,900
- Cutoff Value = (1,100 + (0.15 x 6,900)) = 2,135

The ABBOTT PRISM System calculates the ABBOTT PRISM HTLV-I/HTLV-II assay S/CO for each sample and control using the following formula:

S/CO = Sample Net Counts - Cutoff Value

Example:
- Sample Net Counts = 3,000
- Cutoff Value = 2,135
- S/CO = 3,000 - 2,135 = 1,865

Interpretation of Results

- In the ABBOTT PRISM HTLV-I/HTLV-II assay, specimens with Net Counts less than the cutoff value are nonreactive and need not be tested further. Reactive specimens are considered positive for anti-HTLV-I/HTLV-II by the criteria of the ABBOTT PRISM HTLV-I/HTLV-II assay.
- Specimens with Net Counts greater than or equal to the cutoff value are considered initially reactive by the criteria of the ABBOTT PRISM HTLV-I/HTLV-II assay. All specimens (excluding non-frozen plasma samples) that are reactive on initial testing must be centrifuged prior to retesting according to the table in the SPECIMEN COLLECTION AND PREPARATION FOR ANALYSIS section of this package insert. Initially reactive specimens must be retested in duplicate using the ABBOTT PRISM HTLV-I/HTLV-II Assay Kit.

NOTE: Specimens released within 24 hours of initial centrifugation do not require recentrifugation.

- If the specimen Net Counts for both duplicate tests are less than the cutoff value, the specimen is nonreactive. Nonreactive specimens are considered negative for anti-HTLV-I/HTLV-II by the criteria of the ABBOTT PRISM HTLV-I/HTLV-II assay.
- If the specimen Net Counts for either duplicate test are greater than or equal to the cutoff value, the specimen is considered reactive. Reactively reactive results indicate the presence of anti-HTLV-I/HTLV-II by the criteria of the ABBOTT PRISM HTLV-I/HTLV-II assay.
- Follow appropriate FDA recommendations and regulations for specimens found to be repeatedly reactive. Customers outside the U.S. must follow their country’s government recommendations and regulations for specimens found to be repeatedly reactive.
- Individuals who are repeatedly reactive may be referred for medical evaluation and additional testing.

Reading Results

Some S/CO values may be flagged with "<" or "*" symbols. For more information on sample reports, refer to the ABBOTT PRISM Operations Manual, Section 5. Operating Instructions, Reports. The ABBOTT PRISM System reports sample results in Net Counts and S/CO. Net Counts are used by the ABBOTT PRISM System to interpret results. The S/CO value is provided in reports to show reactivity relative to the cutoff value. In the ABBOTT PRISM HTLV-I/HTLV-II assay, specimens with S/CO values of less than 1.00 are considered nonreactive. Specimens with an S/CO value of greater than or equal to 1.00 are considered reactive.

System Errors

For a description of the error codes that appear on ABBOTT PRISM System reports, refer to the ABBOTT PRISM Operations Manual, Section 10.
LIMITATIONS OF THE PROCEDURE

- This assay was designed and validated for use with individual human serum and plasma specimens. This assay has not been validated for use with pooled specimens.
- The Abbott PRISM HTLV-I/II assay does not discriminate between HTLV-I and HTLV-II antibody reactivity.
- A test result that is negative does not exclude the possibility of exposure to or infection with HTLV-I and/or HTLV-II. Negative results in this assay in individuals with prior exposure to HTLV-I and/or HTLV-II may be due to antibody levels below the limit of detection of this assay or lack of antibody reactivity to the HTLV antigens used in this assay.
- Guidelines published by the U.S. Public Health Service recommend that repeatedly reactive specimens be investigated by additional more specific tests such as Western blot and radiomunoimmunoassay (RIPA). These supplemental tests should be used in addition to type-specific probes or probe tests for HTLV-I and HTLV-II discrimination. Interpretation of such tests should be consistent with these published guidelines.
- False-reactive test results can be expected with any test kit. False-reactive test results have been observed due to nonspecific interactions. Refer to the SPECIFIC PERFORMANCE CHARACTERISTICS section of this package insert for assay performance characteristics.
- Do not use specimens collected in heparin. Use of heparin as an anticoagulant may cause a reduction in Sample Net Counts and in S/CO for Abbott PRISM HTLV-I/II, therefore, negative results for the Abbott PRISM HTLV-I/II assay.
- Serum from hemophiliac patients may be incompletely coagulated. Erroneous or inconsistent test results may occur due to the presence of fibrin. To prevent this phenomenon, draw specimen prior to heparin therapy.
- Do not use heat-inactivated specimens.
- Some specimens that have undergone multiple freeze-thaw cycles or have been stored frozen for prolonged periods may result in erroneous or inconsistent test results.
- Previously frozen specimens must be centrifuged per the SPECIMEN COLLECTION and PREPARATION section of this package insert prior to running the assay.
- Performance has not been established using cadaveric specimens, umbilical cord blood, or body fluids such as urine, saliva, semen, amniotic fluid, cerebrospinal fluid, or pleural fluid. These specimens should not be tested using the Abbott PRISM HTLV-I/II assay.
- Do not use specimens with obvious microbial contamination, gross lipemia, or gross hemolysis.

SPECIFIC PERFORMANCE CHARACTERISTICS

Assay Reproducibility

Assay reproducibility was determined by testing a seven-member panel consisting of three diluted specimen reactive or borderline reactive for anti-HTLV-I (panel members 1, 2, and 3), three diluted specimen reactive or borderline reactive for anti-HTLV-II (panel members 4, 5, and 6), and three non-reactive specimens for anti-HTLV-I and anti-HTLV-II (panel member 7). Each panel member was prepared in reconstituted human plasma. Each panel member was tested in replicates of four in five runs over five days with each of three reagent lots at five sites. In addition, each panel member was tested in replicates of four in five runs over five days with one of the three reagent lots at four of the five sites. The Negative, Positive, and Supplemental Positive Controls were tested once at the beginning and end of each run on each subchannel. The Negative and Positive Calibrators and the HTLV-II Positive Control Assay (1) were automatically tested in triplicate at the beginning of each run on each subchannel. The intra-assay and inter-assay standard deviation (SD) and percent coefficient of variation (%CV) were determined with a variance component analysis,28 for a mixed model29 (Table III).

Abbott PRISM HTLV-I/II Assay Reproducibility

<table>
<thead>
<tr>
<th>Panel Member</th>
<th>Number of Replicates</th>
<th>Mean S/CO</th>
<th>SD</th>
<th>%CV</th>
<th>Mean S/CO</th>
<th>SD</th>
<th>%CV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative</td>
<td>379</td>
<td>6.95</td>
<td>0.33</td>
<td>4.7</td>
<td>0.408</td>
<td>5.8</td>
<td></td>
</tr>
<tr>
<td>380</td>
<td>380</td>
<td>3.38</td>
<td>0.12</td>
<td>4.4</td>
<td>1.341</td>
<td>5.9</td>
<td></td>
</tr>
<tr>
<td>380</td>
<td>380</td>
<td>2.79</td>
<td>0.42</td>
<td>15.1</td>
<td>0.651</td>
<td>22.8</td>
<td></td>
</tr>
<tr>
<td>380</td>
<td>380</td>
<td>2.52</td>
<td>0.39</td>
<td>15.4</td>
<td>0.651</td>
<td>22.8</td>
<td></td>
</tr>
<tr>
<td>380</td>
<td>380</td>
<td>3.83</td>
<td>0.34</td>
<td>8.8</td>
<td>0.651</td>
<td>15.7</td>
<td></td>
</tr>
<tr>
<td>380</td>
<td>380</td>
<td>0.30</td>
<td>0.00</td>
<td>10.1</td>
<td>0.000</td>
<td>10.1</td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>380</td>
<td>2.57</td>
<td>0.16</td>
<td>6.3</td>
<td>0.136</td>
<td>6.3</td>
<td></td>
</tr>
<tr>
<td>380</td>
<td>380</td>
<td>1.27</td>
<td>0.17</td>
<td>15.5</td>
<td>0.151</td>
<td>5.7</td>
<td></td>
</tr>
</tbody>
</table>

Table III: Abbott PRISM HTLV-I/II Assay Reproducibility

Table V: Reactivity of the Abbott PRISM HTLV-I/II Assay in Whole Blood Donors by Reagent Lot

<table>
<thead>
<tr>
<th>Reagent Kit Lot</th>
<th>Category</th>
<th>Number Tested</th>
<th>IR (%) Total (95% CI)</th>
<th>RR (%) Total (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serum</td>
<td>4,066</td>
<td>0.00 (0.03)</td>
<td>0.00 (0.03)</td>
<td></td>
</tr>
<tr>
<td>1 Plasma</td>
<td>5,967</td>
<td>2.03 (0.03)</td>
<td>0.00 (0.03)</td>
<td></td>
</tr>
<tr>
<td>Total Donors</td>
<td>10,033</td>
<td>2.02 (0.04)</td>
<td>0.00 (0.04)</td>
<td></td>
</tr>
<tr>
<td>Serum</td>
<td>2,085</td>
<td>0.00 (0.03)</td>
<td>0.00 (0.03)</td>
<td></td>
</tr>
<tr>
<td>2 Plasma</td>
<td>3,781</td>
<td>8.21 (0.02)</td>
<td>0.04 (0.03)</td>
<td></td>
</tr>
<tr>
<td>Total Donors</td>
<td>5,870</td>
<td>8.24 (0.03)</td>
<td>0.04 (0.03)</td>
<td></td>
</tr>
<tr>
<td>Serum</td>
<td>2,093</td>
<td>3.14 (0.03)</td>
<td>0.00 (0.03)</td>
<td></td>
</tr>
<tr>
<td>3 Plasma</td>
<td>3,947</td>
<td>18.40 (0.03)</td>
<td>0.20 (0.03)</td>
<td></td>
</tr>
<tr>
<td>Total Donors</td>
<td>6,040</td>
<td>21.35 (0.03)</td>
<td>0.17 (0.03)</td>
<td></td>
</tr>
</tbody>
</table>

Abbott PRISM HTLV-I/II assay postmarker data from 33,196,218 samples tested from September 2011 through August 2012 across 85 reagent lots indicate repeat reactive rates ranged from 0.03% to 0.17% for the reactive lots used.
### Table VI

**Reactivity of the ABBOTT PRISM HTLV-I/HTLV-II Assay in Individuals Known to be Positive for HTLV-I/HTLV-II Antibodies and Individuals with HTLV-I and/or Suspected HTLV-II Associated Diseases**

<table>
<thead>
<tr>
<th>Category</th>
<th>Number Tested</th>
<th>Number Reactive on HTLV-I</th>
<th>Number Reactive on HTLV-II</th>
<th>Number Reactive on HTLV-I and/or HTLV-II</th>
<th>Number Reactive on HTLV-I on HTLV-I Associated Disease</th>
<th>Number Reactive on HTLV-II on HTLV-I Associated Disease</th>
<th>HTLV-I Type</th>
<th>HTLV-II Type</th>
<th>Number of Suspected HTLV-II Associated Disease</th>
<th>Number of HTLV-I Associated Disease</th>
<th>Number of HTLV-I+ and/or HTLV-II+ Associated Disease</th>
<th>Number of HTLV-I and/or HTLV-II+ Associated Disease</th>
<th>Number of HTLV-I+ and/or HTLV-II+ Associated Disease</th>
<th>Number of HTLV-I+ and/or HTLV-II+ Associated Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preselected</td>
<td>901</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100%</td>
<td>100%</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
</tr>
<tr>
<td>Positive</td>
<td>101</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100%</td>
<td>100%</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
</tr>
<tr>
<td>HTLV-I and/or</td>
<td>114</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100%</td>
<td>100%</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
</tr>
<tr>
<td>Suspected HTLV-II Associated Disease</td>
<td>114</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100%</td>
<td>100%</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2,015</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100%</td>
<td>100%</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
</tr>
</tbody>
</table>

### Table VII

**Reactivity of the ABBOTT PRISM HTLV-I/HTLV-II Assay in Individuals at Increased Risk for HTLV-I and/or HTLV-II Infection from HTLV-I and/or HTLV-II Endemic Areas**

<table>
<thead>
<tr>
<th>Category</th>
<th>Number Tested</th>
<th>Number Reactive on HTLV-I</th>
<th>Number Reactive on HTLV-II</th>
<th>Number Reactive on HTLV-I and/or HTLV-II</th>
<th>Number Reactive on HTLV-I on HTLV-I Associated Disease</th>
<th>Number Reactive on HTLV-II on HTLV-I Associated Disease</th>
<th>HTLV-I Type</th>
<th>HTLV-II Type</th>
<th>Number of Suspected HTLV-II Associated Disease</th>
<th>Number of HTLV-I Associated Disease</th>
<th>Number of HTLV-I+ and/or HTLV-II+ Associated Disease</th>
<th>Number of HTLV-I+ and/or HTLV-II+ Associated Disease</th>
<th>Number of HTLV-I+ and/or HTLV-II+ Associated Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased Risk for HTLV-I and/or HTLV-II Infection</td>
<td>1,256</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100%</td>
<td>100%</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
</tr>
<tr>
<td>HTLV-I and/or HTLV-II Endemic Areas</td>
<td>1,043</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100%</td>
<td>100%</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2,299</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100%</td>
<td>100%</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
<td>100% (100.00)</td>
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</tbody>
</table>