<table>
<thead>
<tr>
<th><strong>Lab Dept:</strong></th>
<th>Microbiology/Virology</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Test Name:</strong></td>
<td>TICK- BORNE DISEASE PANEL PCR, BLOOD</td>
</tr>
</tbody>
</table>

**General Information**

**Lab Order Codes:** TPCR (PCR Only), TPBL (Orders both PCR and Antibody Testing)

**Synonyms:** Ehrlichia chaffeensis; Babesia microti; Tick-borne diseases; Anaplasma phagocytophilum; HME (Human Monocytic Ehrlichiosis); HME (Human Monocytic Ehrlichiosis); Borrelia miyamotoi

**CPT Codes:** 87798 x8 – Infectious Agent, Amplified Probe tech, each

**Test Includes:** Basesia microti, Babesia duncani, Babesia divergens/MO-1, Anaplasma phagocytophilum, Ehrlichia chaffeensis, Ehrlichia ewing/canis, Ehrlichia muris-like and Borrelia miyamotoi PCR. **Note:** As of 12/9/2010: Lyme PCR is no longer tested as part of this panel as blood is not deemed an appropriate specimen. Appropriate specimens for Lyme PCR include: CSF, synovial fluid or tissue. See Test listing: Lyme PCR, CSF or Synovial Fluid. Mayo will offer Lyme PCR, Blood as an individual test for an interim period of time and will eventually discontinue the blood test altogether.

**Logistics**

**Test Indications:** Useful for evaluation of the most common tick-borne diseases found in the United States, including human monocytic and granulocytic ehrlichiosis, and babesiosis. Evaluation of patients with a history of, or suspected, tick exposure who are presenting with fever, myalgia, headache, nausea, and other nonspecific symptoms.

**Lab Testing Sections:** Serology - Sendouts

**Referred to:** Mayo Medical Laboratories (MML Test: TKPNL)

**Phone Numbers:** MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 1 – 4 days, test performed Monday - Saturday

**Special Instructions:** N/A

**Specimen**
**Specimen Type:** Whole Blood

**Container:** Lavender top (EDTA) tube
Note: Green top (heparin) tubes are NOT acceptable.

**Draw Volume:** 1 mL (Minimum: 0.3 mL) blood

**Processed Volume:** Same as Draw Volume

**Collection:** Routine venipuncture, invert specimen gently to mix.

**Special Processing:** Lab Staff: Do Not centrifuge. Specimen should be sent in original collection container as whole blood. Store and send at refrigerated temperatures. Forward promptly.

**Patient Preparation:** None

**Sample Rejection:** Unlabeled or mislabeled specimens; specimens other than EDTA plasma; gross hemolysis; gross lipemia

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**Interpretive**

**Reference Range:**
- **Basesia species, Molecular Detection PCR:**
  - Babesia microti: Negative
  - Babesia duncani: Negative
  - Babesia divergens/BO-1: Negative

- **Ehrlichia/Anaplasma, Molecular Detection PCR:**
  - Anaplasma phagocytophilum: Negative
  - Ehrlichia chaffeensis: Negative
  - Ehrlichia ewingii/canis: Negative
  - Ehrlichia muris-like: Negative

- **Borrelia myamotoi, Molecular Detection PCR:**
  - B.myamotoi: Negative

**Critical Values:** N/A

**Limitations:** See individual tests

**Methodology:** Real-Time Polymerase Chain Reaction (PCR)/DNA Probe Hybridization.

**References:** Mayo Medical Laboratories January 2018

**Updates:**
- 12/9/2010: Lyme PCR is no longer tested as part of this panel as blood is not deemed an appropriate specimen. Appropriate specimens for Lyme PCR include: CSF, synovial fluid or tissue.
- 10/25/2016: Borrelia miyamotoi added to panel. CPT coding updated.