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**Lab Dept:** Microbiology/Virology

**Test Name:** EHRLICHIA/ANAPLASMA PCR, BLOOD

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***General Information***

**Lab Order Codes:** EAPB

**Synonyms:** Ehrlichia chaffeensis; Ehrlichia ewingii; Ehrlichia muris-like; HME; Human Granulocytic Ehrlichiosis; Anaplasma phagocytophilum

**CPT Codes:** 87798 x4 – Infectious Agent, Amplified Probe tech

**Test Includes:** Anaplasma phagocytophilum PCR, Ehrlichia chaffeensis PCR, Ehrlichia Ewingii/canis PCR, Ehrlichia muris-like PCR.

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***Logistics***

**Test Indications:** Evaluating patients suspected of acute anaplasmosis or ehrlichiosis.

**Lab Testing Sections:** Serology - Sendouts

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

**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

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***Specimen***

**Specimen Type:** Blood

**Container:** Lavender top (EDTA) tube

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

**Processed Volume:** Same as Draw Volume

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

<b>Special Processing:</b>	Lab Staff: <b>Do Not</b> centrifuge. Specimen should be sent in original collection container as whole blood. Store and ship at refrigerated temperatures. Forward promptly.
<b>Patient Preparation:</b>	None
<b>Sample Rejection:</b>	Unlabeled or mislabeled specimens; anticoagulants other than EDTA; gross lipemia

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### ***Interpretive***

<b>Reference Range:</b>	<p>Negative (Reference values apply to all ages)</p> <p>Positive results indicate presence of specific DNA from <i>Ehrlichia chaffeensis</i>, <i>Ehrlichia ewingii</i>, <i>Ehrlichia murris-like</i>, or <i>Anaplasma phagocytophilum</i> and support the diagnosis of ehrlichiosis or anaplasmosis.</p> <p>Negative results indicate absence of detectable DNA from any of these 4 pathogens in specimens, but it does not exclude the presence of the organism or active/recent disease.</p> <p>Since DNA of <i>Ehrlichia ewingii</i> is indistinguishable from that of <i>Ehrlichia canis</i> by this rapid PCR assay, a positive result for <i>Ehrlichia ewingii</i>/<i>Ehrlichia canis</i> indicates the presence of DNA from either of these 2 organisms.</p>
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**Critical Values:** N/A

**Limitations:** A negative result does not indicate absence of disease.

Inadequate specimen draw or improper conditions for storage and/or transport may invalidate test results.

This assay should not be used for screening asymptomatic individuals, and should only be used to test patients with signs and symptoms of ehrlichiosis or anaplasmosis.

This test may detect DNA of *Ehrlichia canis* (reported to cause asymptomatic infection in Venezuela only).

This PCR test does not detect DNA of *Rickettsia* (formerly *Ehrlichia*) *sennetsu*, which has been reported to cause a rare mononucleosis-like illness in humans (in Japan and Malaysia).

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

**References:** [Mayo Medical Laboratories](#) December 2022

**Updates:** 1/28/2016: CPT update.  
12/20/2022: Testing transitions to a new performing laboratory within Mayo Clinic to streamline processes of molecular microbiology.

