Lab Dept:	**Microbiology/Virology**
Test Name:	**CMV BY PCR, BLOOD**

General Information

Lab Order Codes:	CMVQU
Synonyms:	Cytomegalovirus PCR, Plasma; CMV DNA Detect/Quant, Plasma
CPT Codes:	87497 - Infectious agent detection by nucleic acid (DNA or RNA); cytomegalovirus amplified probe technique
Test Includes:	CMV detection by PCR. This test **does not** include CMV Culture.

Logistics

Test Indications:	Early detection of CMV viremia. Monitoring CMV disease progression and response to antiviral therapy.
Lab Testing Sections:	Microbiology/Serology - Sendouts
Referred to:	Mayo Clinic Laboratories (Test: CMVQN)
Phone Numbers:	MIN Lab: 612-813-6280 STP Lab: 651-220-6550
Test Availability:	Daily, 24 hours
Turnaround Time:	1 – 5 days, test set-up Monday - Saturday
Special Instructions:	N/A

Specimen

Specimen Type:	Blood
Container:	Lavender top (EDTA) tube
Draw Volume:	4.5 mL (Minimum: 1.8 mL) blood
Processed Volume:	1.5 mL (Minimum: 0.6 mL) plasma
Collection:	Routine blood collection, invert gently to mix.

Special Processing:	Lab Staff: Centrifuge specimen within 2 hours of collection, remove plasma aliquot into a screw-capped plastic vial. Store and ship at frozen temperatures. Forward promptly. Plasma specimen is stable frozen (preferred) for 84 days and refrigerated for 6 days.
Patient Preparation:	None
Sample Rejection:	Specimens other than plasma; mislabeled specimens or unlabeled specimens

Interpretive

Reference Range:	Undetected The quantification range of this assay is 35 to 10,000,000 IU/mL (1.54 log to 7.00 log IU/mL), with a 95% or higher limit of detection at 35 IU/mL. A result of "Undetected" indicates the absence of cytomegalovirus (CMV) DNA in the plasma (see Limitations). A result of "<35 IU/mL (<1.54 log IU/mL)" indicates that CMV DNA is detected in the plasma, but the assay cannot accurately quantify the CMV DNA present below this level. A quantitative value (reported in IU/mL and log IU/mL) indicates the level of CMV DNA (ie, viral load) present in the plasma. A result of ">10,000,000 IU/mL (>7.00 log IU/mL)" indicates that CMV DNA level present in plasma is above 10,000,000 IU/mL (7.00 log IU/mL), and the assay cannot accurately quantify CMV DNA present above this level.
Limitations:	Cytomegalovirus (CMV) viral load results generated with this assay may be higher (up to 1.00 log IU/mL) than those from the previous Cobas Ampliprep/Cobas Taqman CMV Test (Roche Molecular Systems, Inc.), due to the differences in sensitivity of the assays. Mutations within the highly-conserved regions of the CMV DNA polymerase (UL54) gene covered by cobas CMV may affect primers or probe binding resulting in the under-quantitation of virus of failure to detect the presence of virus. The cobas CMV assay mitigates this risk through the use of redundant CMV target sequence amplification primers.
Methodology:	Real-Time Reverse Transcription-Polymerase Chain Reaction (RT-PCR)

Additional Information:	CMV may be present in the blood in healthy seropositive individuals at very low levels. CMV serology may confirm current infection.
References:	Mayo Clinic Laboratories Web September 2023
Updates:	3/18/2004: Test moved from Eastern Virginia Medical School Department of Pathology to Mayo Medical Laboratories. 6/3/2013: Method change, previously listed as Real-Time PCR/DNA Probe Hybridization 8/19/2015: Draw volume change 8/3/2013: Draw volume change, updated PCR method. 9/21/2023: Updated turnaround time, added specimen stability, corrected links.